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BEFORE THE

U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

NHTSA DOCKET NO. NHTSA - 2002-11398-8

PETITION FOR RULEMAKING TO AMEND 49 C.F.R. §571.110:

TO ESTABLISH A RESERVE PRESSURE REQUIREMENT FOR TIRES SELECTED FOR USE ON MOTOR VEHICLES WITH A GVWR OF 10,000 POUNDS OR LESS

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DATED: JULY 19, 2002

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GVWR OF 10,000 POUNDS OR LESS

The Rubber Manufacturers Association[1] ("RMA"), on behalf of its members, petitions the National Highway Traffic Safety Administration ("NHTSA"), pursuant to 49 C.F.R. §552.3, to initiate a rulemaking to amend Standard No. 110 of the Federal Motor Vehicle Safety Standards ("FMVSS-110"), 49 C.F.R. §571.110, to establish a reserve pressure requirement for tires selected for use on motor vehicles having a gross vehicle weight rating ("GVWR") of 10,000 pounds or less. This new rulemaking is necessary because Part One of the final Tire Pressure Monitoring System ("TPMS") regulations recently issued by NHTSA 49 C.F.R. §571.138 ("FMVSS-138"), 67 *Federal Register* 38704-38749 (June 5, 2002) does not:

1) adequately protect motor vehicle operators from the risks of driving on significantly under-inflated tires and thus fails to meet the requirements of the National Motor Vehicle Safety Act, 49 U.S.C. §30166 *et seq*, and
2) meet requirements of Section 13 of the Transportation Recall Enhancement, Accountability and Documentation Act, P.L. 106-14 ("TREAD Act");

To address this serious deficiency in Part One of the Final TPMS standards, RMA requests that NHTSA adopt the proposed revision to FMVSS-110 as stated in **Attachment I**. RMA's proposed standard requires motor vehicle manufacturers to establish the recommended cold inflation pressure (also known as the "placard" pressure), currently required by FMVSS-110, using a "PRESSURE RESERVE" based on the minimum pressure required to carry the vehicle load and the activation pressure of the selected TPMS. This revision to FMVSS-110 is necessary because it is widely recognized and confirmed in NHTSA's own survey data that "[m]any vehicles have significantly under-inflated tires, primarily because drivers infrequently check their vehicle's tire pressure." (67 *Fed. Reg.* at 38713-14). Moreover, RMA believes there

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[1] The Rubber Manufacturers Association ("RMA") is the leading national trade association representing the interests of tire and rubber manufacturers in the United States. RMA's membership includes all of the country's major tire manufacturers: Bridgestone/Firestone Americas Holding, L.L.C.; Continental Tire N.A., Inc.; Cooper Tire & Rubber Company; The Goodyear Tire & Rubber Company; Michelin North America, Inc.; Pirelli Tire North America; and, Yokohama Tire Corporation.

is a substantial risk that the new TPMS standards will, in practice, confuse or mislead consumers into believing that their tires are properly inflated whenever the TPMS warning is not illuminated[2]. This is precisely the opposite of what Congress intended in enacting Section 13 of the TREAD Act.

Even after promulgation of the new TPMS standards, there is an option available to NHTSA to address these concerns. Granting this petition and adopting RMA's proposed standard as part of a new rulemaking to amend FMVSS-110 will ensure that consumers receive sufficient advance warning from the new TPMS before experiencing tire damage or tire failure. This was clearly Congress's intent in enacting Section 13 of the TREAD Act and should therefore be given high priority by NHTSA. The effective date of the proposed pressure reserve rule should be consistent with Part One phase-in of the final rule for FMVSS 138.

Below, we provide background information and justification to assist the agency's review of this petition under 49 C.F.R.§552.6.

I. BACKGROUND

A. Tire Pressure and Load Relationships

Pressure, load and resulting deflection greatly influence tire performance. Each tire has a minimum required inflation pressure associated with each load in the range of loads it can carry under well-defined industry standards[3]. Any pressure below that minimum results in over-deflection of the tire and increases the risk of tire failure. Vehicle manufacturers are required by FMVSS-110 or FMVSS-120 to select a tire and inflation pressure that is adequate to carry the load of the vehicle based on tire industry standards. Therefore, the "vehicle placard pressure," or recommended pressure, is always equal to or greater than the minimum pressure required to carry the load on the tire. Operating a tire at its recommended pressure will ensure that the tire will not become excessively hot due to over-deflection from under-inflation of the tire or overloading of the vehicle. Excessive heat will cause a change in the material properties of the tire and, if sufficiently prolonged, will result in the separation of its components and structural failure.

A vehicle designer may choose a placard pressure higher than the minimum required pressure for many reasons. A higher placard pressure results in less deflection of the tire and reduces rolling resistance, which leads to improved fuel efficiency. The difference between the placard pressure and the minimum required pressure is the "reserve pressure." This reserve

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[2] NHTSA apparently shares RMA's concerns. As stated in the preamble to the final TPMS standards, the agency plans to "conduct a study comparing the tire pressures of vehicles without any TPMS to the [tire] pressures of vehicles with TPMSs, especially TPMSs that do not comply with the four-tire 25 percent compliance option." 67 *Fed. Reg.* at 38722, col. 3.

[3] The Tire and Rim Association establishes industry standardized load and inflation calculations based on an empirical formula that takes into account specific tire dimensions, aspect ratio, rim diameter and intended use of the tire. The TRA formula is designed to ensure that tire manufacturers can produce interchangeable products. Additionally, other standard setting bodies, include The European Tyre and Rim Technical Organisation ("ETRTO") and The Japan Automobile Tire Manufacturers Association, Inc. ("JATMA").

pressure is the amount of pressure that can be lost without over-deflection of the tire and the risk of tire damage or failure.

Some vehicles have enough reserve in the placard pressure so that the tire pressures could drop 25 to 30 percent below the placard pressure without going below the minimum pressure required to carry the load of the vehicle. It is also true that many vehicles do not have enough reserve in the placard pressure to allow the tire pressures to drop 25 to 30 percent below the placard pressure without going below the minimum pressure required to carry the load of the vehicle. In these latter cases, the tires will not have enough pressure to carry the load of the vehicle even though the pressure has not dropped 25 to 30 percent below the placard pressure and the driver will not have been warned. The definition of "significantly under-inflated," therefore, cannot be tied to the placard pressure unless the regulation includes a requirement for all vehicles to have a reserve in the placard pressure above a specified minimum, which would be determined by the tolerance requirements of the TPMS installed on the vehicle. Please see **Attachment II** for a further discussion of the need for and examples of how the 25 and 30 percent reserve can be achieved.

B. NHTSA's Proposed Tire Testing Standards Do Not, *De Facto*, Establish a Reserve Pressure Requirement for Passenger and Light Truck Tires

In our comments in response to the TPMS notice of proposed rulemaking[4], RMA urged NHTSA to adopt a pressure reserve (or "reserve load") requirement as part of the final TPMS standards. NHTSA chose not to do so, in part, because the agency believes its proposed revisions to the current tire testing standards, FMVSS-109, "in effect, would require tires to have a reserve load." (67 *Fed. Reg.* 38726, col. 1). NHTSA is incorrect in drawing this conclusion. The NPRM on testing (FMVSS-139) proposes selection of tires based on vehicle normal load not exceeding 85 percent of the tire load rating at placard pressure. Current FMVSS-110 allows selection based on vehicle normal load not exceeding 88 percent of tire maximum load. This 88 to 85 percent change, while providing some pressure reserve gain, is not adequate, in many cases, to offset the 25 or 30 percent deficit allowed in FMVSS-138. Thus, there remains a need to create a requirement for a reserve pressure margin[5].

Tires are designed to perform within a range of industry established loads and pressures. Over-deflection occurs when the pressure falls below the inflation pressure required to carry the load, thus increasing the risk of tire structural damage. The chance of structural damage depends on many factors such as the degree of over-deflection, time, speed, ambient temperature, and various forces imposed on the tire. It is possible that a tire can be over-deflected without structural damage. However, it is also possible that some damage has occurred that may not become evident for many miles.

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[4] 49 CFR Part 571, Docket No. NHTSA 2000-8572-116, September 6, 2001.

[5] Even NHTSA's proposed low pressure tire tests will not insure tires have the capability to withstand over-deflection. This is because completion of a 90-minute test at the activation pressure of TPMS is no guarantee that a tire can run indefinitely at a pressure slightly above the activation point but below the pressure required to carry the load.

III.E. (81 sample vehicles) and **Attachment V.B.** (19 sample vehicles). **Attachment IV.** shows the positive effect of increasing inflation pressure on the first set of sample vehicles as it relates to their reserve pressure. Essentially, it shows that by adding the pressure necessary to create the pressure reserve – often by just a few psi – the percentage of the sample vehicles with sufficient reserve pressure can be significantly increased.

Again, RMA believes this data is reliable and compelling. The summary data in the various attachments graphically show a need for a reserve pressure requirement. As we have stated before, there is the potential risk that many motorists will soon face as they rely on their vehicle TPMS to warn them when their tire pressure drops below what is required to safely carry the load. Many vehicles have tires mounted on them, which, per the placard directed pressure, have little or no reserve to begin with and thus require more frequent pressure maintenance to ensure safe operating conditions. Such vehicles, when fitted with TPMSs requiring 25 or 30 percent pressure reductions before warning the driver, will allow tires to operate for extended periods of time at unsafe, under-inflated conditions. We do not believe that the operator will continue to frequently check their tire inflation pressure if the vehicle is equipped with a TPMS. NHTSA also has reached the same conclusion[10]. This potentially dangerous situation can be averted by requiring the placard pressure to account for the reduction required by the TPMS installed on the vehicle.

III. CONCLUSION

FMVSS-110 should be revised to ensure that the new TPMS standards (49 C.F.R. §571.138, 67 *Fed. Reg.* at 38746-48), provide adequate advance warning to the vehicle operator (under either the 25 percent under-inflation standard as in "Option 1," S4.2.1, or the 30 percent under-inflation standard as in "Option 2," S4.2.2) before the tires become over deflected and excessively hot. The pressure reserve must be adequate to allow tire inflation pressures to fall by an amount equal to the capability of the TPMS on the vehicle, and still maintain sufficient tire pressure to support the vehicle maximum load on the tire. An amendment to FMVSS-110 to require a pressure reserve for all passenger and light truck tire-vehicle combinations will ensure that the new TPMS standards in FMVSS-138 adequately protect consumer safety.

Because many vehicles manufactured today already have a pressure reserve of at least 25 to 30 percent, and since many newly designed vehicles would be expected to have adequate pressure reserves, RMA's proposed pressure reserve standard will not impose an unreasonable burden on the automobile industry. Those vehicles with existing adequate reserve pressures can easily be fitted with TPMSs to meet the first year (November 1, 2002 to October 31, 2004), and second year (November 1, 2004 to October 31, 2005) 10 and 35 percent vehicle phase-in compliance requirements. With the addition of only slightly higher placard pressures, vehicle manufacturers can also meet the third year (November 1, 2005 to October 31, 2006), 65 percent

[10] Data from the July 2001 Bureau of Transportation Statistics (BTS) omnibus survey indicate that, "65 percent of people would be less concerned, to either a great extent or a very great extent, with routinely maintaining the pressure of their tires if their vehicle were equipped with a TPMS." (67 Fed. Reg. at 38718, emphasis added).

vehicle compliance. Any vehicle redesign as a consequence of a reserve pressure requirement would not, therefore, be required for at least four more years. Thus, costs for such changes could be spread out over at least a four-year period and probably considerably longer. Moreover, the costs for such changes would be more than offset by the safety benefits derived.

For all of the reasons discussed above, the Rubber Manufacturers Association requests that NHTSA grant this petition and initiate a rulemaking to amend 49 C.F.R. §571.110 to establish a reserve pressure requirement for tires selected for use on motor vehicles having a gross vehicle weight rating ("GVWR") of 10,000 pounds or less. The American public deserves no less.

Respectfully submitted,

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July 19, 2002

Attachment I.

RMA Recommended Specific Changes to 49 CFR § 571.110:

[Changes based on the March 5, 2002 NPRM on test standards on page 10076.]

S3. Definitions

PRESSURE RESERVE means the amount of pressure difference between the vehicle placard tire inflation pressure and the minimum pressure required to support the VEHICLE MAXIMUM LOAD ON THE TIRE. The minimum PRESSURE RESERVE required on a vehicle depends on the capability of the TPMS used on the vehicle.

* * * * *

S4.2.1 Tire Load Limits for Passenger Cars

S4.2.1.1 The VEHICLE MAXIMUM LOAD ON THE TIRE shall not be greater than the load corresponding to the vehicle placard tire inflation pressure, reduced by the PRESSURE RESERVE, for the tire size shown on the vehicle placard.

S4.2.1.1.1 The PRESSURE RESERVE must be adequate to allow tire inflation pressures to fall by an amount equal to the capability of the TPMS on the vehicle, and still maintain sufficient tire pressure to support the VEHICLE MAXIMUM LOAD ON THE TIRE. The minimum PRESSURE RESERVE can be calculated as follows:

PR(min.) = VPP(min.) x .XX

where:
PR(min.) = Minimum PRESSURE RESERVE
VPP(min.) = Minimum Vehicle Placard Tire Inflation Pressure
XX = Capability of the TPMS on Vehicle (expressed as a %)

The minimum vehicle placard tire inflation pressure can be calculated as follows:

VPP(min.) = VMLP / (1 - .XX)

where:
VPP(min.) = Minimum Vehicle Placard Tire Inflation Pressure
VMLP = Pressure Corresponding to the VEHICLE MAXIMUM LOAD ON THE TIRE
XX = Capability of the TPMS on Vehicle (expressed as a %)

* * * * *

S4.2.2 Tire Load Limits for Multipurpose Passenger Vehicles, Trucks, Buses, and Trailers

S4.2.2.1 Except as provided in S4.2.2.2, the sum of the individual tire loads corresponding to the vehicle placard tire inflation pressure, reduced by the PRESSURE RESERVE, of the tires fitted to an axle shall not be less than the GAWR of the axle system as specified on the vehicle's certification label required by 49 CFR part 567. If the certification label shows more than one GAWR for the axle system, the sum shall be not less than the GAWR corresponding to the size designation of the tires fitted to the axle. If the size designation of the tires fitted to the axle does not appear on the certification label, the sum shall not be less than the lowest GAWR appearing on the label.

S4.2.2.1.1 The PRESSURE RESERVE must be adequate to allow tire inflation pressures to fall by an amount equal to the capability of the TPMS on the vehicle, and still maintain sufficient tire pressure to support the VEHICLE MAXIMUM LOAD ON THE TIRE. The minimum PRESSURE RESERVE and the minimum vehicle placard tire inflation pressure can be calculated as shown in S4.2.1.1.1

* * * * *

[Changes based on December 19, 2001 NPRM on tire safety information page 65561.]

S4.3.2(c) (in NPRM on page 65561) The tire load rating specified in a submission by an individual manufacturer, pursuant to S4.1.1(a) of 571.139 or contained in one of the publications described in S4.1.1(b) of 571.139, for the size tire at that inflation pressure, reduced by the PRESSURE RESERVE, is not less than the VEHICLE MAXIMUM LOAD ON THE TIRE.

* * * * *

Attachment II.

Need for Pressure Reserve Requirement for FMVSS-110

Each tire has specific minimum inflation pressures required to carry specific loads, up to the tire's maximum load rating. This relationship between tire inflation pressure and tire load carrying capability is established by tire standardizing bodies such as The Tire and Rim Association. For example, for a P215/60R16 tire size, the relationship is as follows:

Load (pounds)	Minimum Pressure (psi)
1477 (tire's maximum load rating)	35*
1411	32
1345	29
1279	26
1201	23
1124	20

* *Inflation pressure may be increased above 35 psi, up to the maximum pressure marked on the tire, with no increase in the tire's maximum load rating.*

Any pressure below the minimum pressure required to carry the load being applied to the tire results in over-deflection of the tire and the risk of tire failure.

Assume that a P215/60R16 H speed rated tire with a maximum pressure of 44psi is being fitted on a passenger car with a VEHICLE MAXIMUM LOAD ON THE TIRE of 1279 pounds and a VEHICLE NORMAL LOAD ON THE TIRE of 1124 pounds. The amount of pressure reserve, if any, depends on the placard pressure selected for this vehicle.

The tire industry considers a tire to be "significantly under-inflated" (over-deflected) when the actual inflation pressure falls below the minimum pressure required to carry the load the tire is supporting. In our example, when the vehicle is applying 1279 pounds on a tire and the inflation pressure drops below 26 psi (the minimum pressure required for this tire size to support 1279 pounds), the tire is "significantly under-inflated".

In the Final Rule for Tire Pressure Monitoring Systems (TPMS), NHTSA says that a tire is "significantly under-inflated" when the inflation pressure falls 25 percent below the vehicle placard tire inflation pressure (for vehicles equipped with direct measuring TPMS) or 30 percent below the vehicle placard tire inflation pressure (for vehicles equipped with indirect measuring TPMS). Inflation pressures 25 to 30 percent below the vehicle placard pressure may result in over-deflection of tires and the risk of tire failures, unless an additional PRESSURE RESERVE is included in the vehicle placard

pressure. In order to use the NHTSA definition of "significantly under-inflated", while ensuring that tires are not over-deflected, NHTSA needs to add a minimum PRESSURE RESERVE requirement to FMVSS-110. This PRESSURE RESERVE must be included in the calculations to determine the minimum pressure needed for the vehicle placard tire inflation pressure. The amount of PRESSURE RESERVE required will depend on the capabilities of the TPMS on the vehicle as specified by NHTSA in FMVSS-138. The operator of the vehicle must be warned when any tire pressure falls below the minimum pressure required to carry the load the tire is supporting. In our example, the PRESSURE RESERVE requirement in FMVSS-110 would result in a vehicle placard pressure of at least 35 psi for a vehicle equipped with a TPMS having a capability of 25 percent or a placard pressure of at least 38 psi for a vehicle equipped with a TPMS having a capability of 30 percent. In either case, the TPMS would warn the operator when the tire pressure falls below the 26 psi needed to carry the load of 1279 pounds. Please see Figures I, II, and III on the following page for a graphic display of the explanation cited above.

Vehicle manufacturers already voluntarily provide an adequate PRESSURE RESERVE in many of the light vehicles on the road today, but some do not. Universal application of this PRESSURE RESERVE requirement for all light vehicles will provide for a reasonable and practicable standard; one that enhances the safety of the motoring public as required by both the TREAD Act and the Motor Vehicle Safety Act.

* * *

FIGURE I.

Vehicle without Adequate Pressure
in Placard Pressure for 25% or 30% TPMS

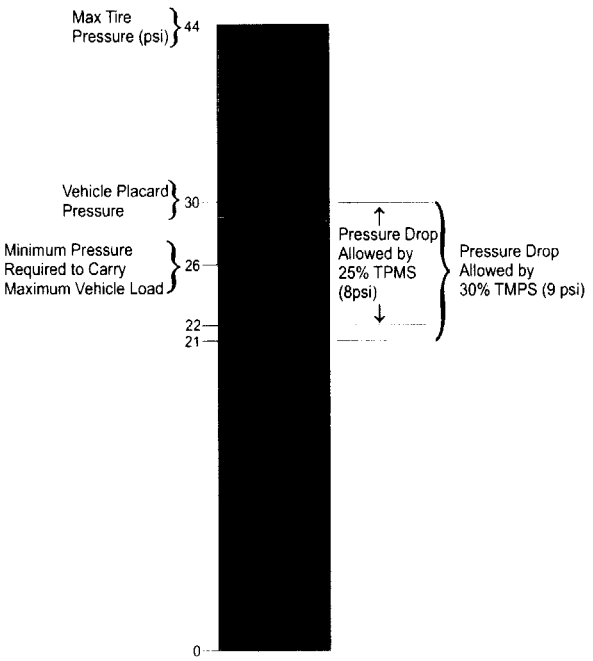


FIGURE II.

Vehicle with 25% Pressure Reserve
in Placard Pressure - Adequate for 25% TPMS

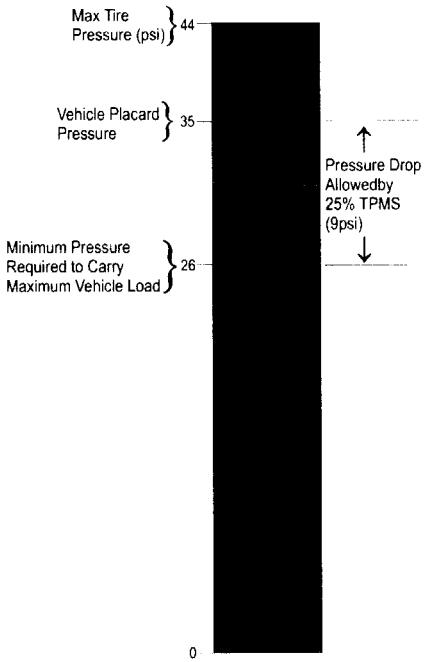
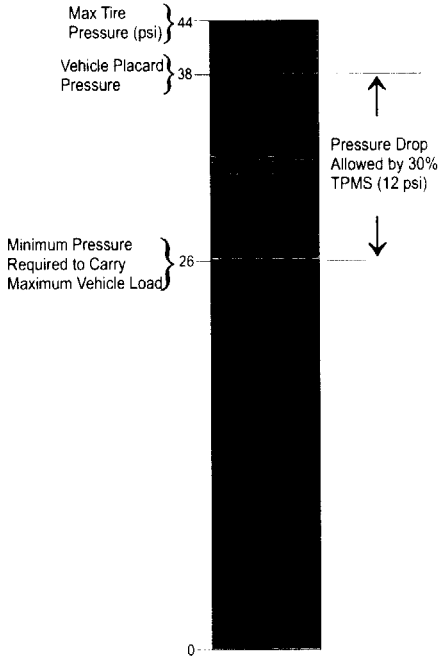


FIGURE III.

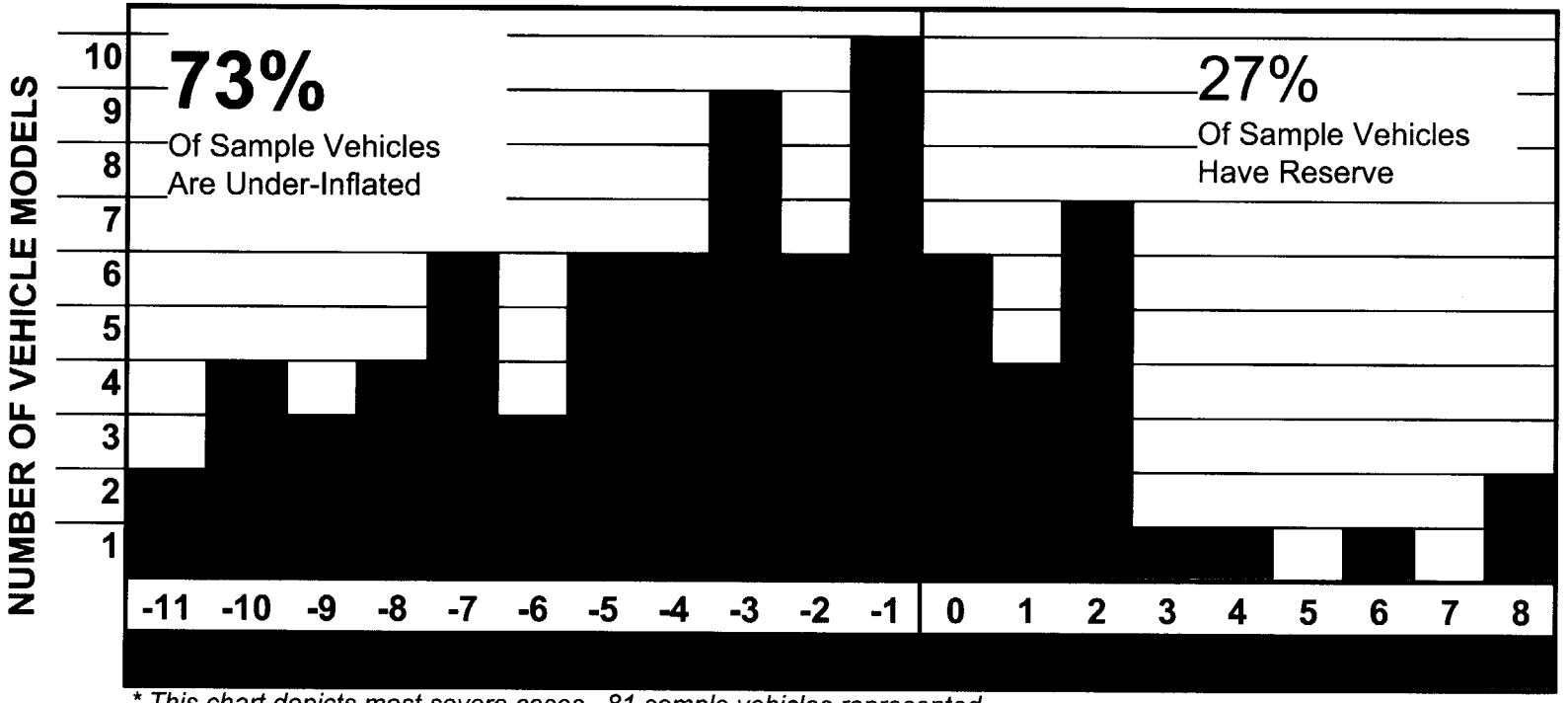
Vehicle with 30% Pressure Reserve
in Placard Pressure - Adequate for 30% TPMS



Attachment III.A.

HISTOGRAM SUMMARY*:

RESERVE OR UNDER-INFLATION
AT TPMS WARNING ACTIVATION OF 30% TPMS

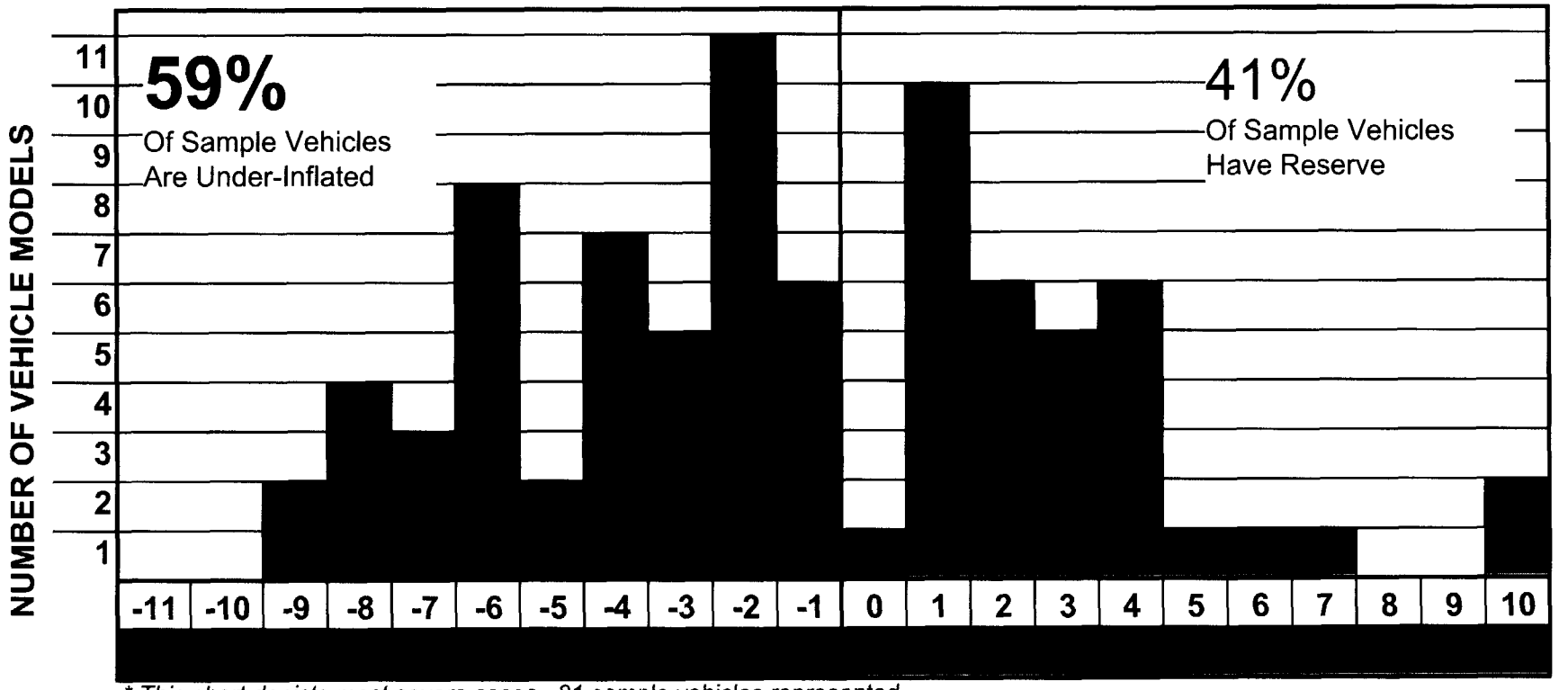


** This chart depicts most severe cases. 81 sample vehicles represented.*

Attachment III.A.

HISTOGRAM SUMMARY*:

RESERVE OR UNDER-INFLATION
AT TPMS WARNING ACTIVATION OF 25% TPMS



** This chart depicts most severe cases. 81 sample vehicles represented.*

Attachment III.B.

RESERVE OR UNDER-INFLATION AT TPMS WARNING ACTIVATION OF

30% TPMS

MODEL YEAR	VEHICLE TYPE		30% TPMS SCENARIO
			-12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12
1997	SPORTS CAR	Sporty	
1997	FULL SIZE		
1998	LUXURY	Entry	
1998	MID SIZE	Entry	
1998	MID SIZE	Premium	
1999	VAN	Compact	
2000	MID SIZE	Entry	
2000	FULL SIZE		
2000	LUXURY	Entry	
2000	VAN	Compact	
2000	SPORTS CAR	Sporty	
2000	VAN	Compact	
2000	MID SIZE	Premium	
2000	COMPACT	Premium	
2000	MID SIZE	Entry	
2000	VAN	Compact	
2000	FULL SIZE		
2000	SPORTS CAR	Sporty	
2000	MID SIZE	Premium	
2000	VAN	Compact	
2000	LUXURY	Mid	
2000	LUXURY	Entry	
2000	LUXURY	Mid	
2000	FULL SIZE		
2000	MID SIZE	Premium	
2000	VAN	Compact	
2000	MID SIZE	Premium	
2000	MID SIZE	Entry	
2000	PICKUP	Compact	
2000	SUV	Mid	
2000	VAN	Compact	
2000	COMPACT	Premium	
2000	SUV	Entry	
2000	MID SIZE	Premium	
2000	LUXURY	Entry	
2000	LUXURY	Premium	
2000	SUV	Luxury	
2001	VAN	Compact	
2001	LUXURY	Entry	
2001	FULL SIZE		
2001	COMPACT	Premium	
2001	MID SIZE	Premium	
2001	SPORTS CAR	Sporty	
2001	MID SIZE	Premium	
2001	VAN	Compact	

45
13/45
VANS, SUVs
(48)

Attachment III.B.

MODEL YEAR	VEHICLE TYPE		30% TPMS SCENARIO												
			-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12
2001	MID SIZE	Premium													
2001	MID SIZE	Premium													
2001	MID SIZE	Premium													
2001	COMPACT	Premium													
2001	MID SIZE	Premium													
2001	VAN	Compact													
2001	SPORTS CAR	Sporty													
2001	FULL SIZE														
2001	SPORTS CAR	Sporty													
2001	LUXURY	Mid													
2001	LUXURY	Entry													
2001	LUXURY	Mid													
2001	FULL SIZE														
2001	MID SIZE	Premium													
2001	VAN	Compact													
2001	LUXURY	Entry													
2001	COMPACT	Premium													
2001	COMPACT	Premium													
2001	SUV	Luxury													
2001	SPORTS CAR	Sporty													
2001	SPORTS CAR	Premium													
2002	LUXURY	Entry													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2002	SUV	Luxury													
2002	SPORTS CAR	Premium													
2002	LUXURY	Entry													
2002	LUXURY	Entry													
2002	LUXURY	Mid													
2002	SPORTS CAR	Premium													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2003	LUXURY	Entry													
2003	LUXURY	Entry													

36

4 SUV, Vans of 36

81

Total

17 of 81

36

Attachment III.C.

RESERVE OR UNDER-INFLATION AT TPMS WARNING ACTIVATION OF

25% TPMS

MODEL YEAR	VEHICLE TYPE		25% TPMS SCENARIO												
			-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12
1997	SPORTS CAR	Sporty													
1997	FULL SIZE														
1998	LUXURY	Entry													
1998	MID SIZE	Entry													
1998	MID SIZE	Premium													
1999	VAN	Compact													
2000	MID SIZE	Entry													
2000	FULL SIZE														
2000	LUXURY	Entry													
2000	VAN	Compact													
2000	SPORTS CAR	Sporty													
2000	VAN	Compact													
2000	MID SIZE	Premium													
2000	COMPACT	Premium													
2000	MID SIZE	Entry													
2000	VAN	Compact													
2000	FULL SIZE														
2000	SPORTS CAR	Sporty													
2000	MID SIZE	Premium													
2000	VAN	Compact													
2000	LUXURY	Mid													
2000	LUXURY	Entry													
2000	LUXURY	Mid													
2000	FULL SIZE														
2000	MID SIZE	Premium													
2000	VAN	Compact													
2000	MID SIZE	Premium													
2000	MID SIZE	Entry													
2000	PICKUP	Compact													
2000	SUV	Mid													
2000	VAN	Compact													
2000	COMPACT	Premium													
2000	SUV	Entry													
2000	MID SIZE	Premium													
2000	LUXURY	Entry													
2000	LUXURY	Premium													
2000	SUV	Luxury													
2001	VAN	Compact													
2001	LUXURY	Entry													
2001	FULL SIZE														
2001	COMPACT	Premium													
2001	MID SIZE	Premium													
2001	SPORTS CAR	Sporty													
2001	MID SIZE	Premium													
2001	VAN	Compact													

Attachment III.C.

MODEL YEAR	VEHICLE TYPE		25% TPMS SCENARIO											
			-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12
2001	MID SIZE	Premium													
2001	MID SIZE	Premium													
2001	MID SIZE	Premium													
2001	COMPACT	Premium													
2001	MID SIZE	Premium													
2001	VAN	Compact													
2001	SPORTS CAR	Sporty													
2001	FULL SIZE														
2001	SPORTS CAR	Sporty													
2001	LUXURY	Mid													
2001	LUXURY	Entry													
2001	LUXURY	Mid													
2001	FULL SIZE														
2001	MID SIZE	Premium													
2001	VAN	Compact													
2001	LUXURY	Entry													
2001	COMPACT	Premium													
2001	COMPACT	Premium													
2001	SUV	Luxury													
2001	SPORTS CAR	Sporty													
2001	SPORTS CAR	Premium													
2002	LUXURY	Entry													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2002	SUV	Luxury													
2002	SPORTS CAR	Premium													
2002	LUXURY	Entry													
2002	LUXURY	Entry													
2002	LUXURY	Mid													
2002	SPORTS CAR	Premium													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2002	COMPACT	Premium													
2003	LUXURY	Entry													
2003	LUXURY	Entry													

Attachment III.D. Example of Selected Sample Vehicle with Figure*

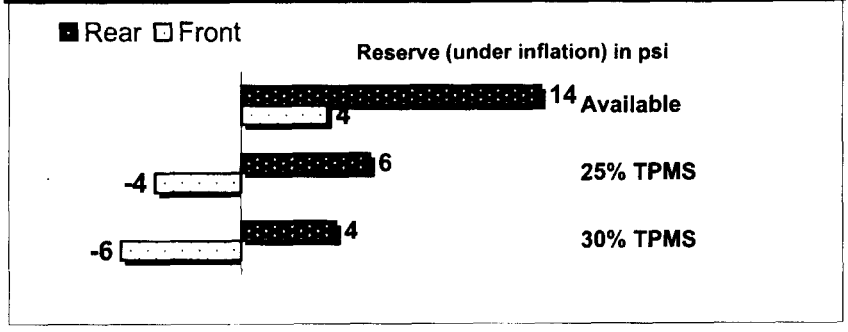
Vehicle Information			
Model Year		2003	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/60R16 91V
Maximum Load (kg)	615
Pressure (kPa)	240

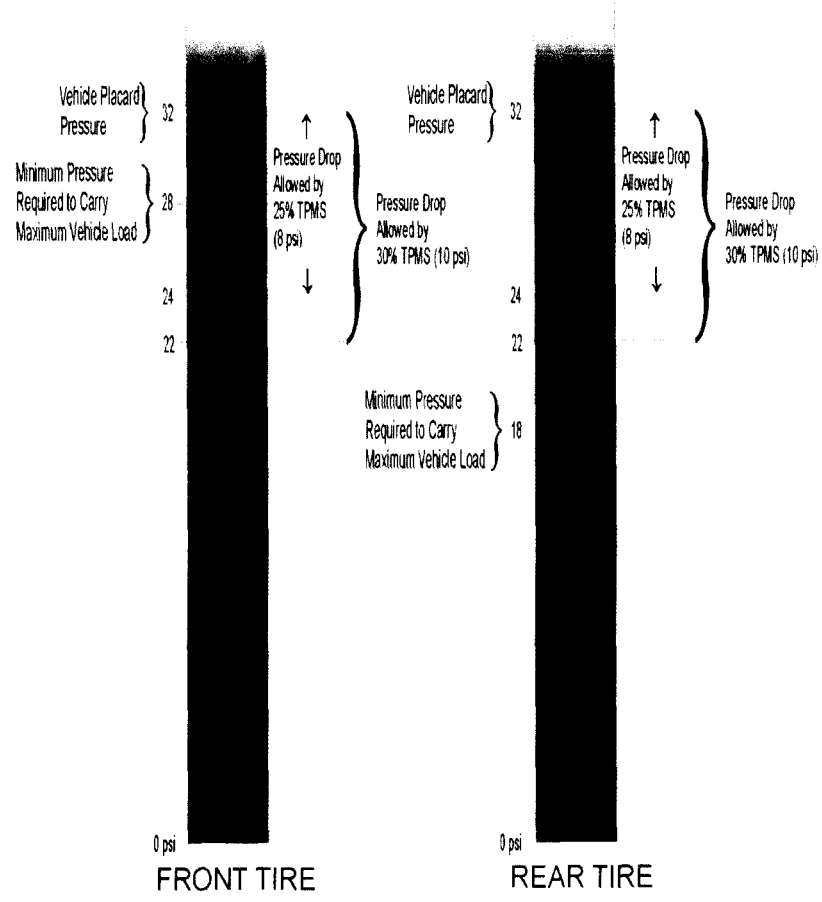
Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1104	881	1985
Tire Load	552	440	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	192	122
	psi	28	18

	Front	Rear
Available Reserve Pressure (psi) at Placard	4	14
Reserve (under inflation) for 25% TPMS option	(4)	6
Reserve (under inflation) for 30% TPMS option	(6)	4



Pressure Reserve Calculation Figure



* *The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

Vehicle Information			
Model Year		2002	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

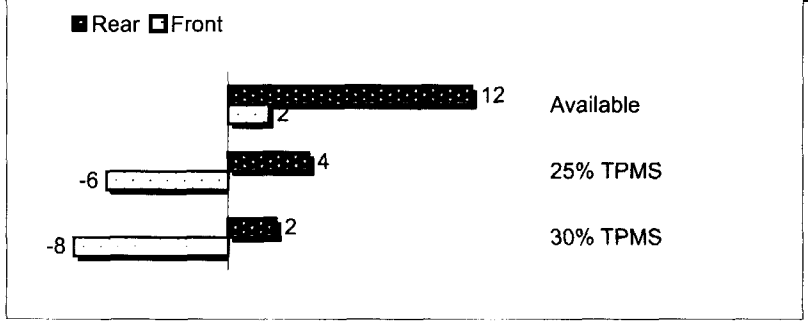
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 93V
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1110	900	2010
Tire Load	555	450	

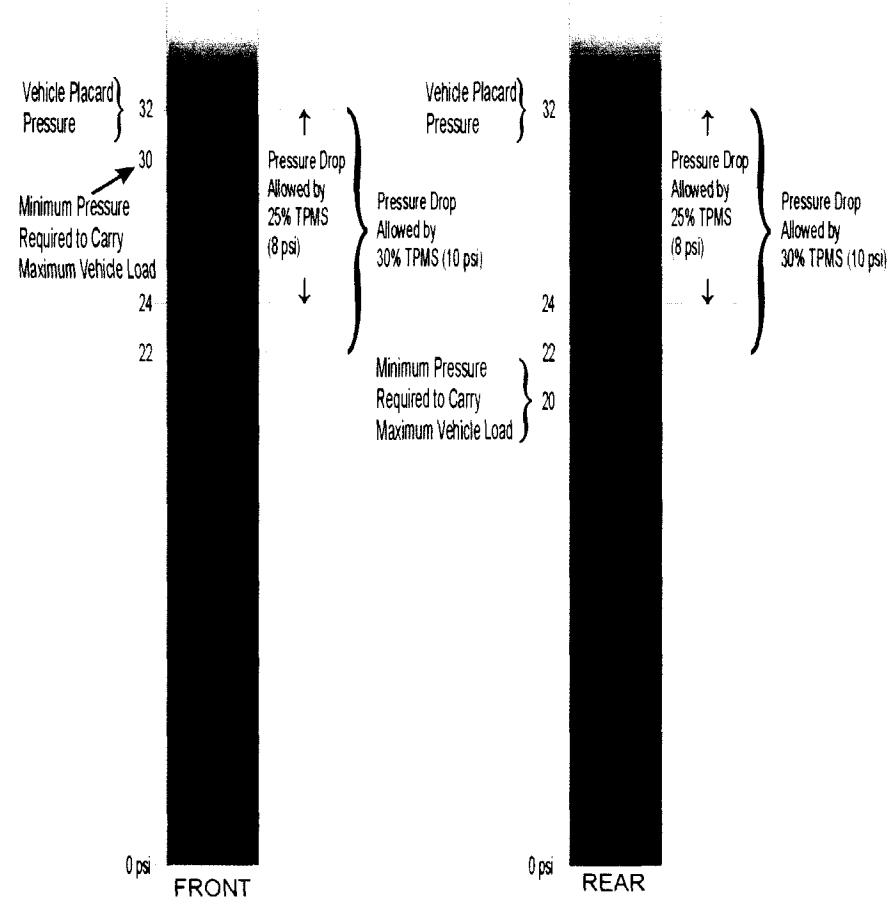
*** = data not available; estimated

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	205	135
	psi	30	20

	Front	Rear
Available Reserve Pressure (psi)	**2**	**12**
Reserve (under inflation) for 25% TPMS option	**(6)**	**4**
Reserve (under inflation) for 30% TPMS option	**(8)**	**2**



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

Vehicle Information			
Model Year	2002		
Type	SPORTS CAR	Premium	
Seating (frt/rear)	2	2	
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	230	230	
psi	33	33	

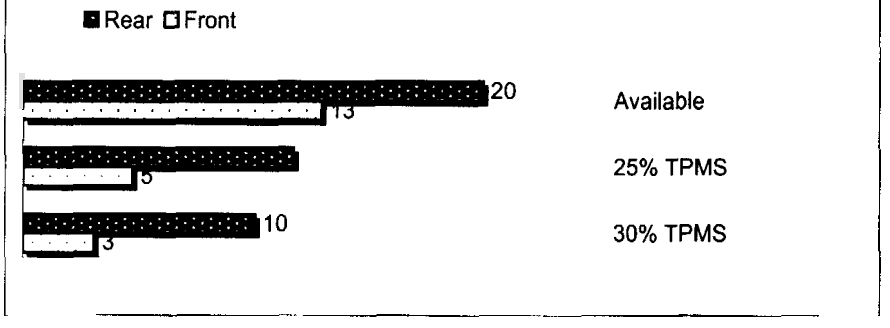
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/55R16 89V
Maximum Load (kg)	580

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	867	713	1580
Tire Load	433	356	

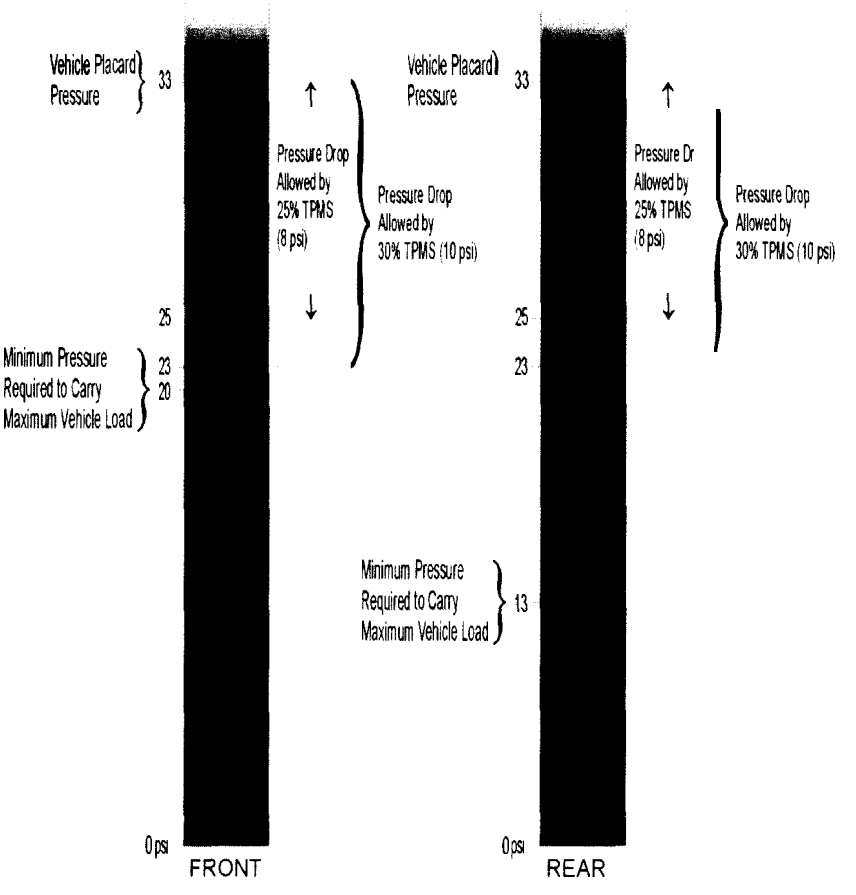
*** = data not available; estimated

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	138	93
psi	20	13

	Front	Rear
Available Reserve Pressure (psi)	13	20
Reserve (under inflation) for 25% TPMS option	5	12
Reserve (under inflation) for 30% TPMS option	3	10



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

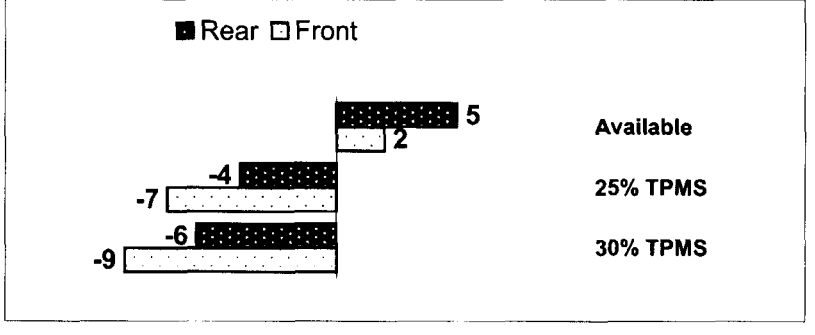
Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	250	250	
psi	36	36	

Tire Load & Inflation Pressure from Standardizing Body	ETRTO Standard
Tire Size	215/65R15 98S
Maximum Load (kg)	750
Pressure (kPa)	250

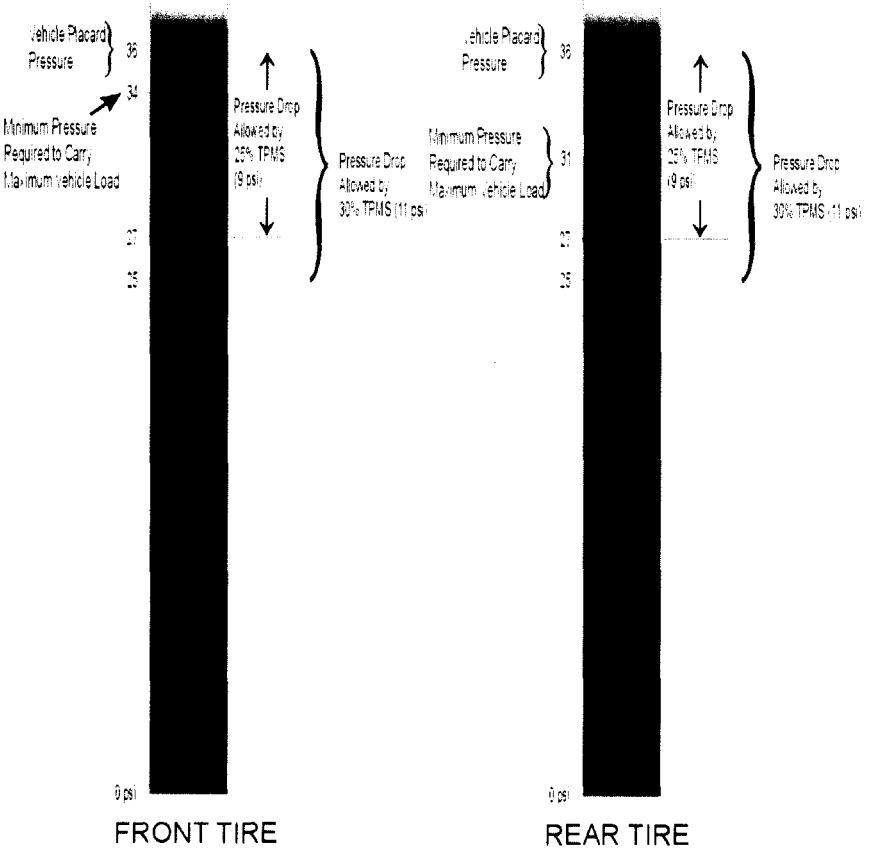
Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1300	1200	2500
Tire Load	650	600	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	236	214
psi	34	31

	Front	Rear
Available Reserve Pressure (psi) at Placard	2	5
Reserve (under inflation) for 25% TPMS option	(7)	(4)
Reserve (under inflation) for 30% TPMS option	(9)	(6)



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

Vehicle Information			
Model Year	2001		
Type	SUV	Luxury	
Seating (frt/rear)	2	5	(2/3/2)
Max Trunk/Cargo Load (kg)	49		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

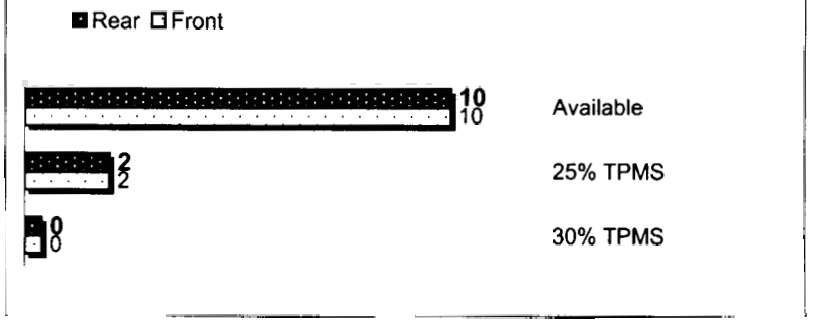
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 235/65R17 103T
Maximum Load (kg)	875
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1268	1262	2530
Tire Load	634	631	

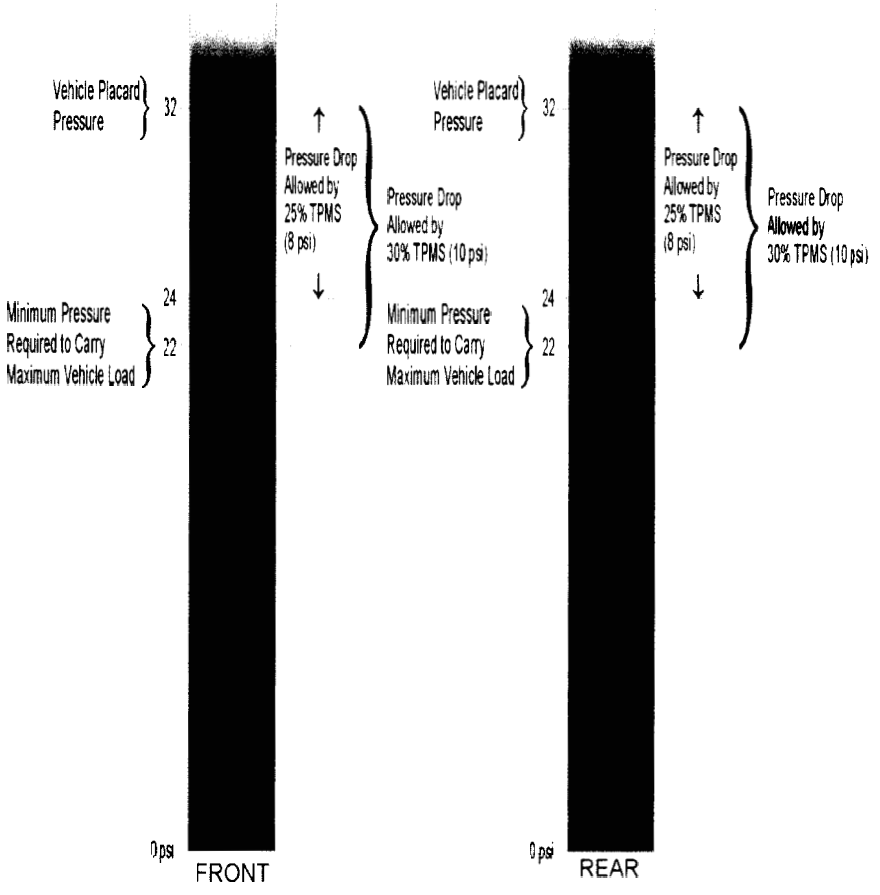
*** = data not available; estimated

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	153	152
psi	22	22

	Front	Rear
Available Reserve Pressure (psi)	10	10
Reserve (under inflation) for 25% TPMS option	2	2
Reserve (under inflation) for 30% TPMS option	0	0



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

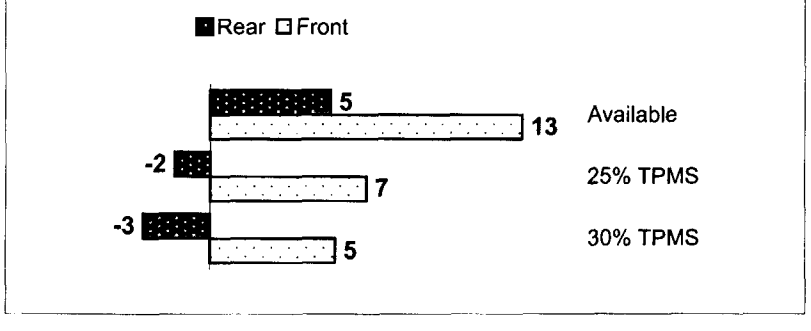
Vehicle Information			
Model Year		2000	
Type		SUV	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		454	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	180	180
	psi	26	26

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 265/70R15
Maximum Load (kg)	1060
Pressure (kPa)	240

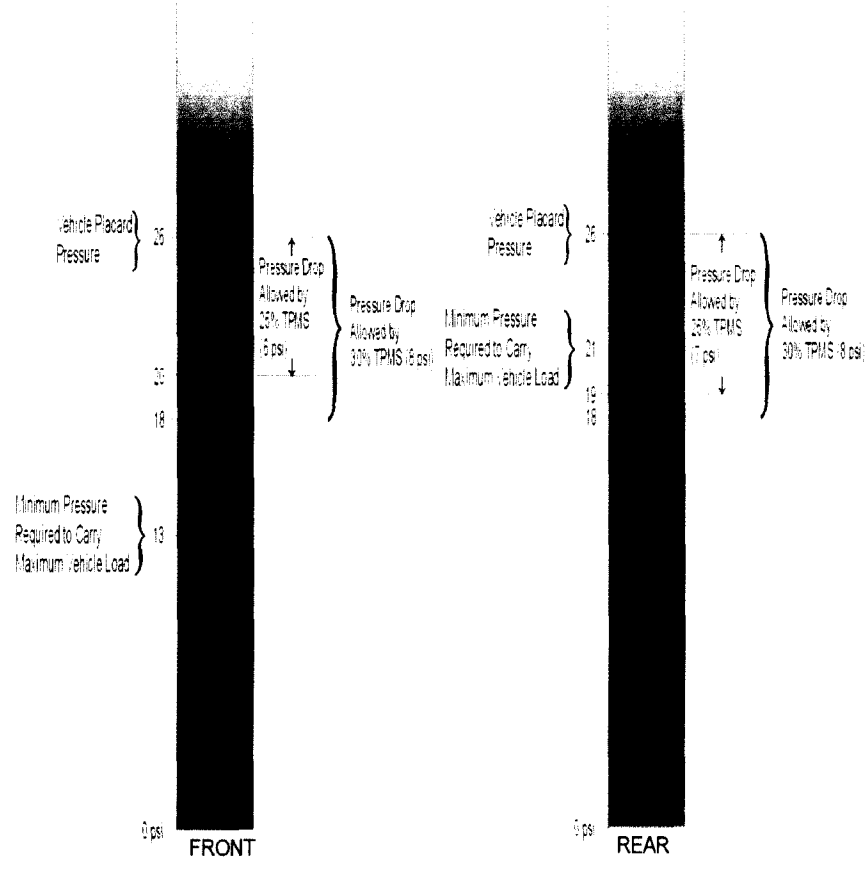
Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1159	1507	2666
Tire Load	579	753	

*** = data not available; estimated

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		---	---
Pressure required to carry Mass/2/1.10 load		X	X
	kPa	87	148
	psi	13	21
		Front	Rear
Available Reserve Pressure (psi)		13	5
Reserve (under inflation) for 25% TPMS option		7	(2)
Reserve (under inflation) for 30% TPMS option		5	(3)



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

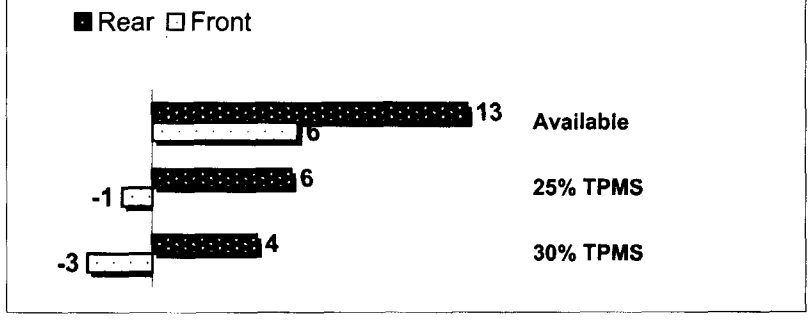
Attachment III.D. Example of Selected Sample Vehicle with Figure*

Vehicle Information			
Model Year		2000	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		50	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	200	200
	psi	29	29

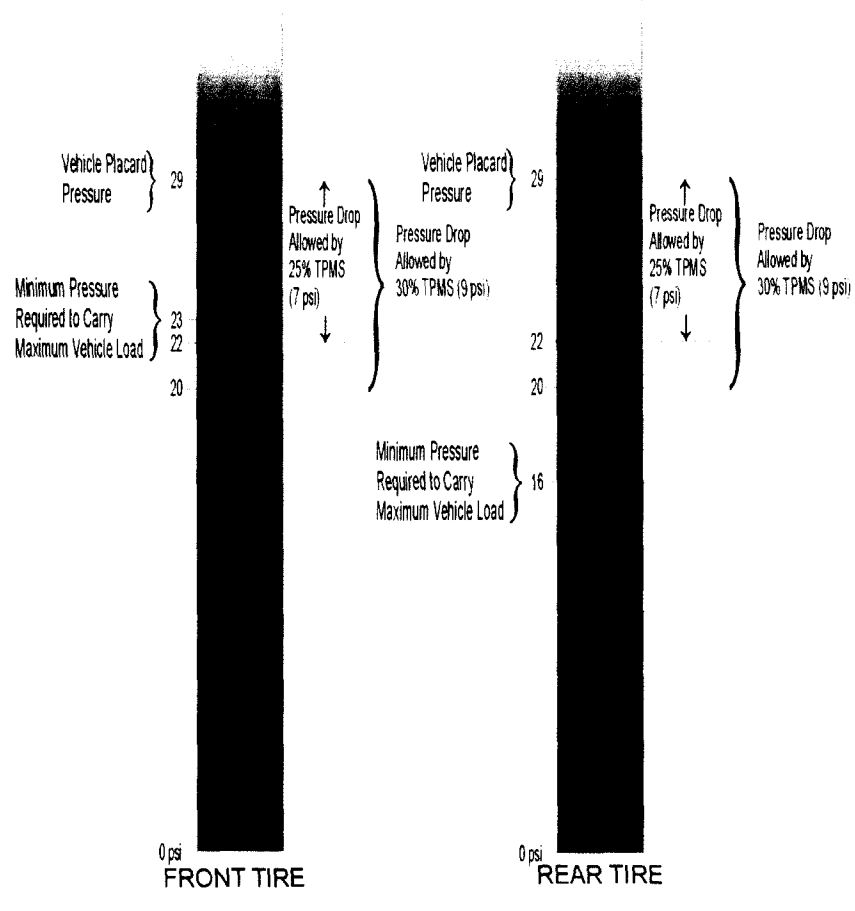
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/65R15 92H
Maximum Load (kg)	635
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1028	861	1889
Tire Load	514	431	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	157	110
	psi	23	16
		Front	Rear
Available Reserve Pressure (psi) at Placard		6	13
Reserve (under inflation) for 25% TPMS option		(1)	6
Reserve (under inflation) for 30% TPMS option		(3)	4



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

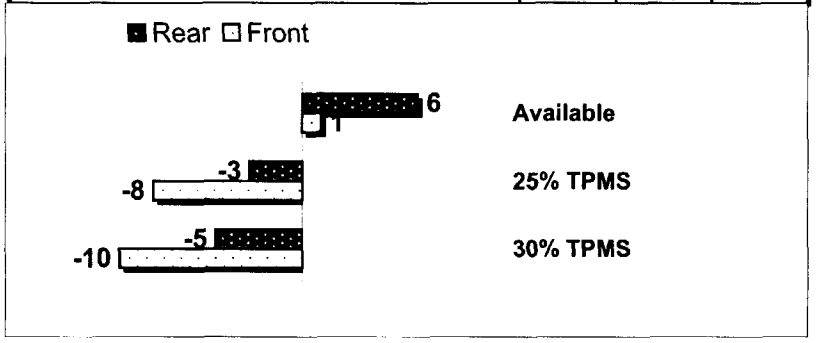
Vehicle Information			
Model Year	1999		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/65R15 95S
Maximum Load (kg)	685
Pressure (kPa)	240

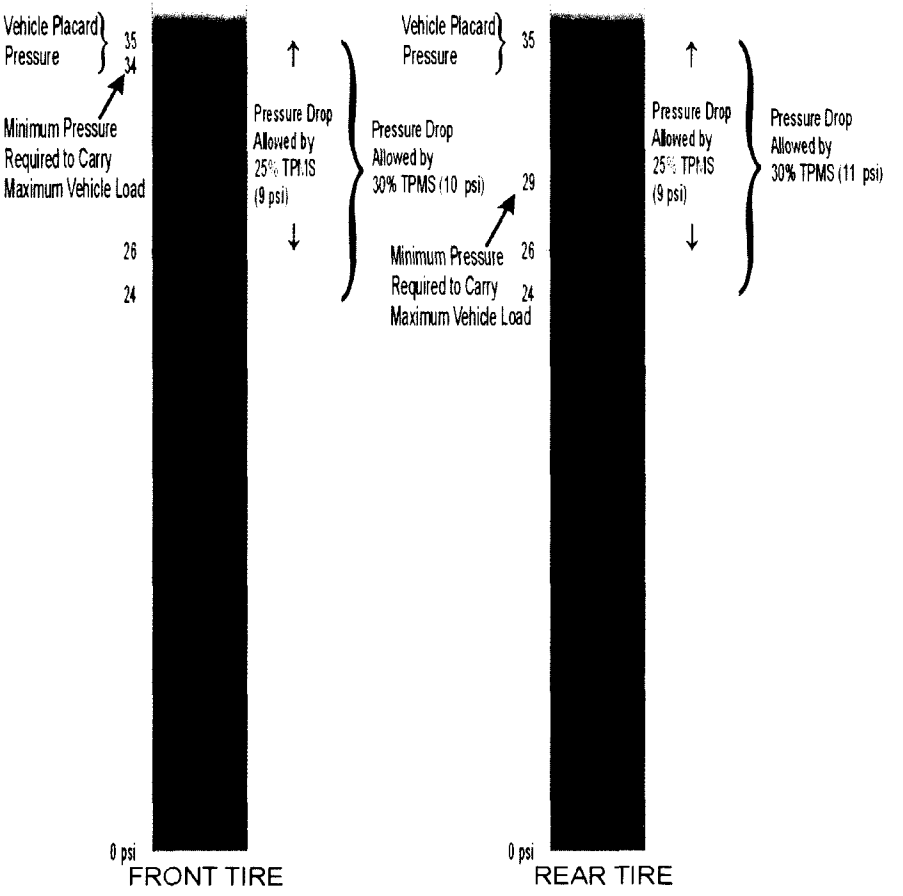
Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1237	1135	2372
Tire Load	618	568	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	235	198
psi	34	29

	Front	Rear
Available Reserve Pressure (psi) at Placard	**1**	**6**
Reserve (under inflation) for 25% TPMS option	**(8)**	**(3)**
Reserve (under inflation) for 30% TPMS option	**(10)**	**(5)**



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.D. Example of Selected Sample Vehicle with Figure*

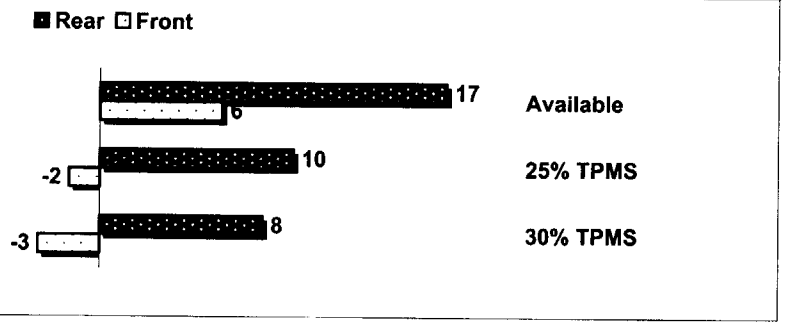
Vehicle Information			
Model Year		1998	
Type		MID SIZE	Premium
Seating (frt/rear)		3	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97S AL2
Maximum Load (kg)	730
Pressure (kPa)	240

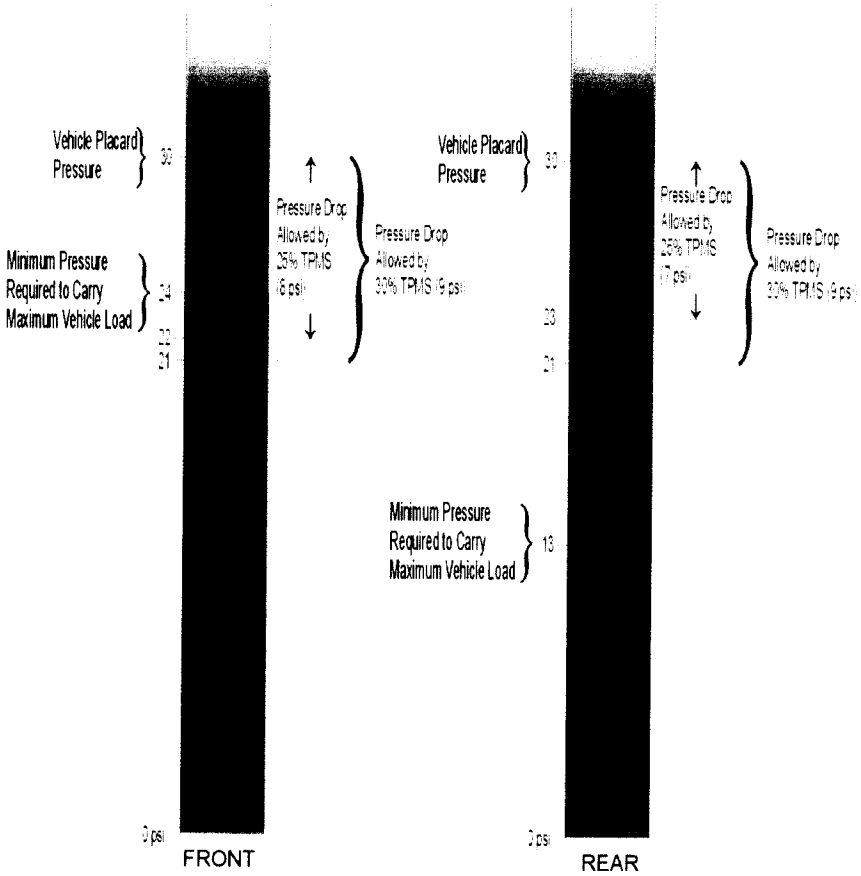
Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1207	868	2076
Tire Load	**604**	**434**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	168	87
psi	24	13

	Front	Rear
Available Reserve Pressure (psi)	**6**	**17**
Reserve (under inflation) for 25% TPMS option	**(2)**	**10**
Reserve (under inflation) for 30% TPMS option	**(3)**	**8**



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

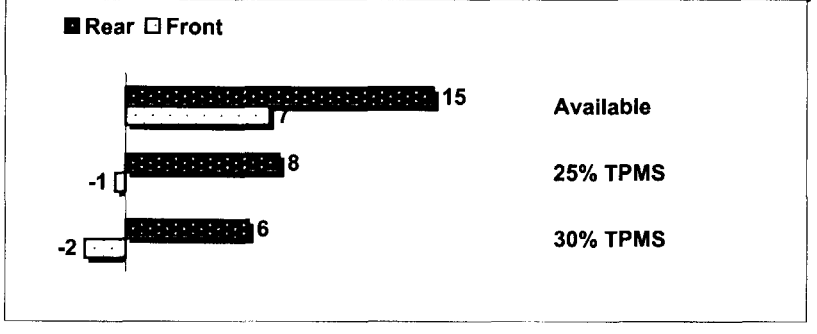
Attachment III.D. Example of Selected Sample Vehicle with Figure*

Vehicle Information			
Model Year	1997		
Type	FULL SIZE		
Seating (frt/rear)	2	3	
Max Trunk/Cargo Load (kg)	80		
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

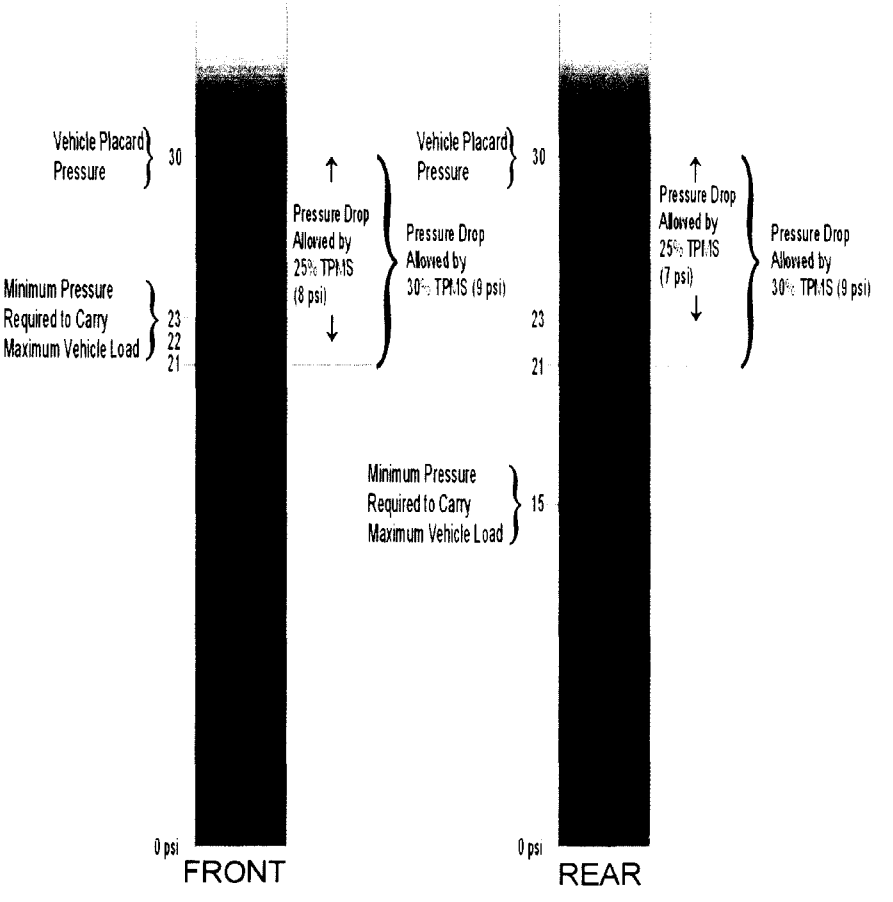
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97S AL2
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1166	930	2096
Tire Load	583	465	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	157	100
	psi	23	15
		Front	Rear
Available Reserve Pressure (psi)		7	15
Reserve (under inflation) for 25% TPMS option		(1)	8
Reserve (under inflation) for 30% TPMS option		(2)	6



Pressure Reserve Calculation Figure



** The examples were chosen at random from Attachment III.E. 25 and 30% TPMS pressure drop rounded to whole psi. For full vehicle sample set please refer to Attachment III.E.*

Attachment III.E.

RESERVE PRESSURE CALCULATIONS

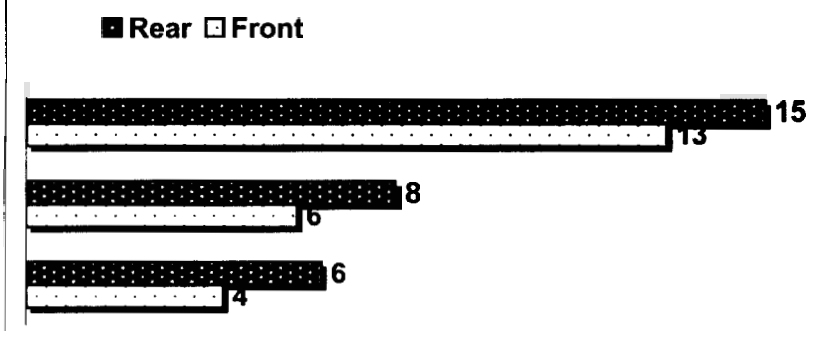
Vehicle Information			
Model Year	1997		
Type	SPORTS CAR	Sporty	
Seating (frt/rear)	2	2	
Max Trunk/Cargo Load (kg)	45.4		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	210	210	
psi	30	30	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 235/55R16
Maximum Load (kg)	710
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1020	958	1977

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load	X	X	
Pressure required to carry Mass/2/1.10 load	---	---	
kPa	120	106	

	Front	Rear
Available Reserve Pressure (psi)	**13**	**15**
Reserve (under inflation) for 25% TPMS option	**6**	**8**
Reserve (under inflation) for 30% TPMS option	**4**	**6**



Attachment III.E.

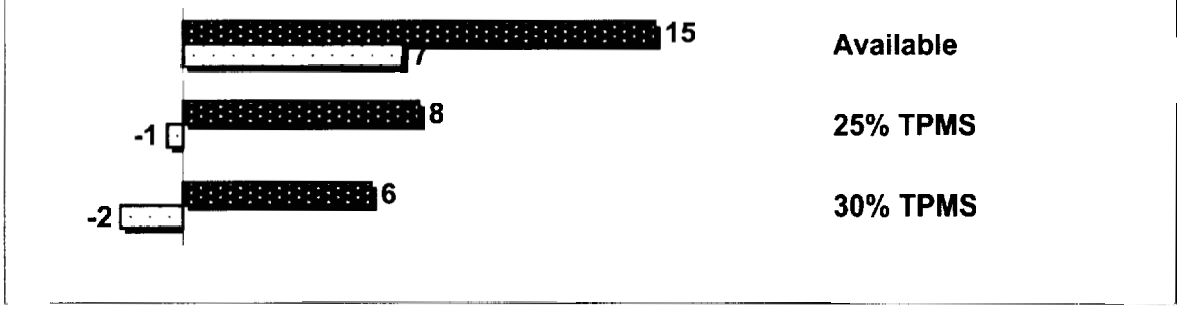
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	1997		
Type	FULL SIZE		
Seating (frt/rear)	2	3	
Max Trunk/Cargo Load (kg)	80		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	210	210	
psi	30	30	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 225/60R16 97S AL2
Maximum Load (kg)	730	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1166	930	2096
Tire Load	**583**	**465**	

	Front	Rear
Available Reserve Pressure (psi)	**7**	**15**
Reserve (under inflation) for 25% TPMS option	**(1)**	**8**
Reserve (under inflation) for 30% TPMS option	**(2)**	**6**



Attachment III.E.

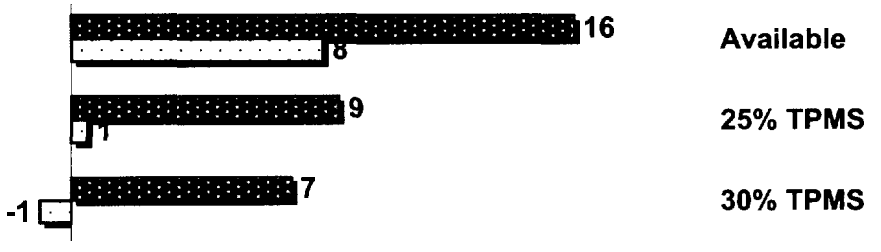
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		1998	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		80	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 235/60R16 99S AL2
Maximum Load (kg)	775
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1228	983	2211
Tire Load	**614**	**492**	

	Front	Rear
Available Reserve Pressure (psi)	**8**	**16**
Reserve (under inflation) for 25% TPMS option	**1**	**9**
Reserve (under inflation) for 30% TPMS option	**(1)**	**7**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

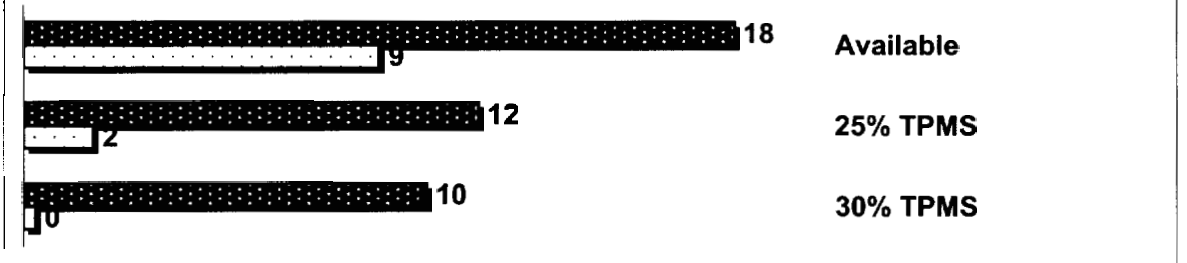
Vehicle Information			
Model Year		1998	
Type		MID SIZE	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		60	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	200	179
	psi	29	26

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R15
Maximum Load (kg)	640	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	974	618	1592
Tire Load	**487**	**309**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	139	56

	Front	Rear
Available Reserve Pressure (psi)	**9**	**18**
Reserve (under inflation) for 25% TPMS option	**2**	**12**
Reserve (under inflation) for 30% TPMS option	**0**	**10**



Attachment III.E.

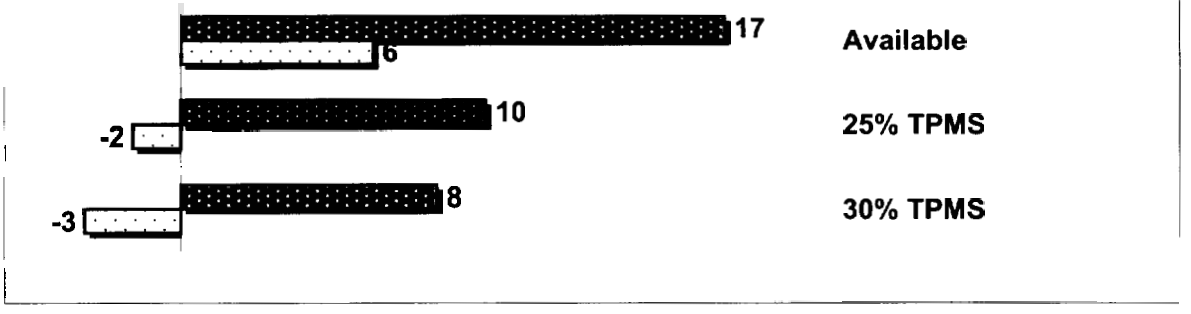
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		1998	
Type		MID SIZE	Premium
Seating (frt/rear)		3	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 225/60R16 97S AL2
Maximum Load (kg)	730	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1207	868	2076
Tire Load	**604**	**434**	

	Front	Rear
Available Reserve Pressure (psi)	**6**	**17**
Reserve (under inflation) for 25% TPMS option	**(2)**	**10**
Reserve (under inflation) for 30% TPMS option	**(3)**	**8**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

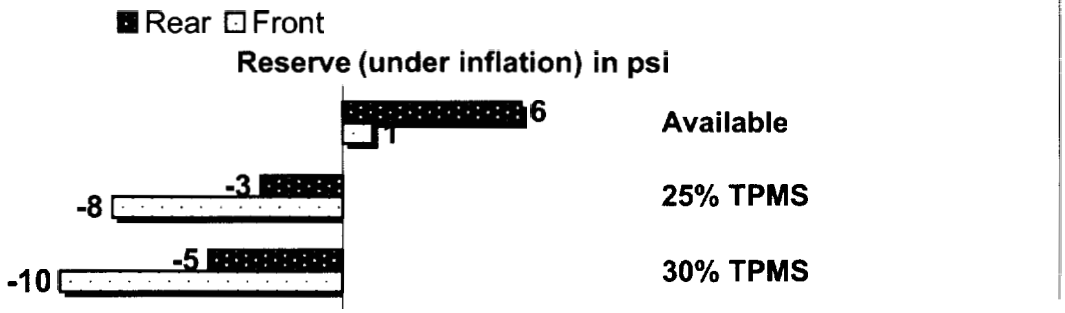
Vehicle Information			
Model Year	1999		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/65R15 95S
Maximum Load (kg)	685	
Pressure (kPa)	240	

	Mass in kg		
	Front	Rear	Total
Total Axle Load	1237	1135	2372
Tire Load	**618**	**568**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	235	198

	Front	Rear
Available Reserve Pressure (psi)	**1**	**6**
Reserve (under inflation) for 25% TPMS option	**(8)**	**(3)**
Reserve (under inflation) for 30% TPMS option	**(10)**	**(5)**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2000	
Type	MID SIZE	Entry
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)	52	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	210	210
psi	30	30

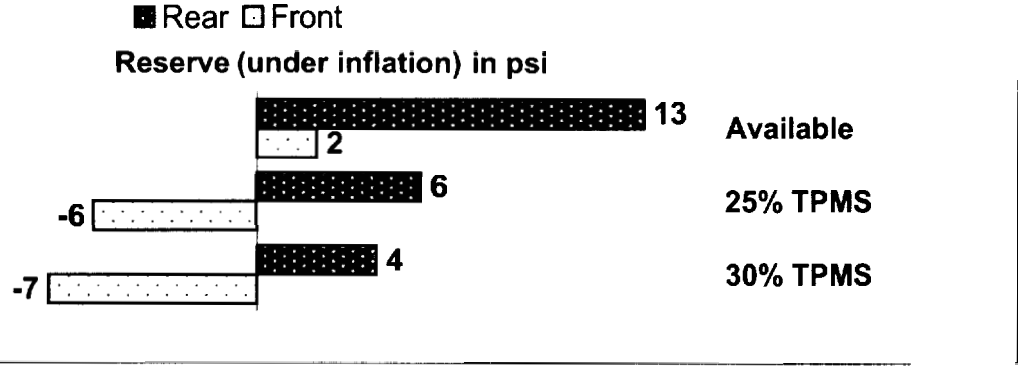
Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 195/65R15 89S
Maximum Load (kg)	580	
Pressure (kPa)	240	

Vehicle Load

Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options

	Mass in kg		
	Front	Rear	Total
Total Axle Load	1043	814	1858

	Front	Rear
Available Reserve Pressure (psi)	2	13
Reserve (under inflation) for 25% TPMS option	(6)	6
Reserve (under inflation) for 30% TPMS option	(7)	4



Attachment III.E.

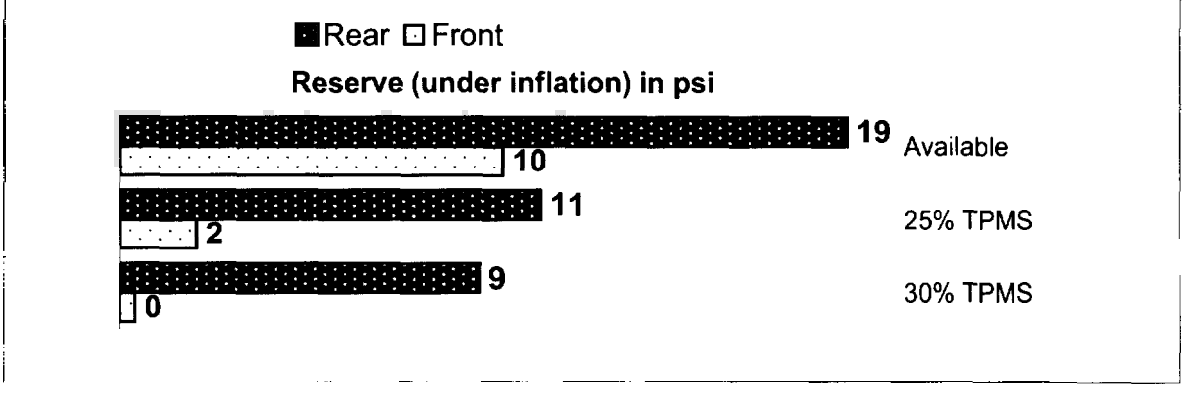
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	FULL SIZE		
Seating (frt/rear)	2	3	
Max Trunk/Cargo Load (kg)	52		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97T
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1153	878	2031

	Front	Rear
Available Reserve Pressure (psi)	**10**	**19**
Reserve (under inflation) for 25% TPMS option	**2**	**11**
Reserve (under inflation) for 30% TPMS option	**0**	**9**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

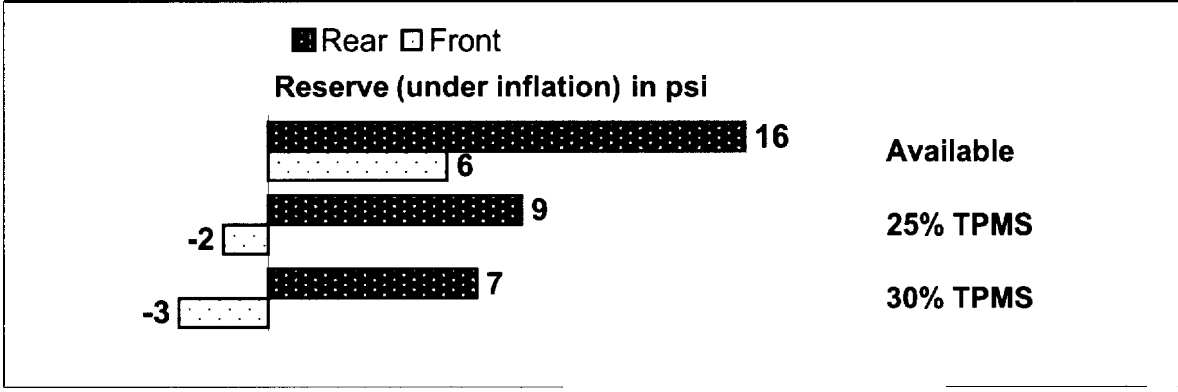
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/55R17 95T
Maximum Load (kg)	690
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1161	880	2041
Tire Load	**580**	**440**	

*** = data not available; estimated

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	166	95
psi	24	14

	Front	Rear
Available Reserve Pressure (psi)	**6**	**16**
Reserve (under inflation) for 25% TPMS option	**(2)**	**9**
Reserve (under inflation) for 30% TPMS option	**(3)**	**7**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

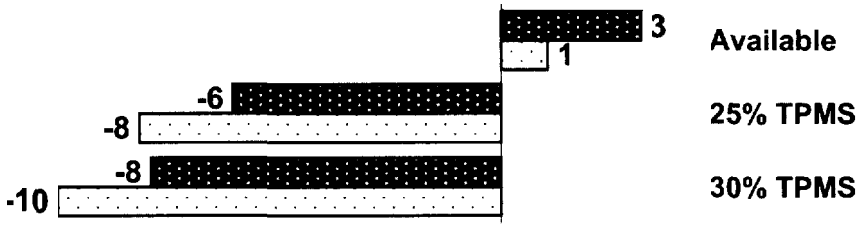
Vehicle Information			
Model Year	2000		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body	ETRTO Standard
Tire Size	215/65R16 98T
Maximum Load (kg)	750
Pressure (kPa)	250

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1293	1247	2540
Tire Load	**646**	**624**	

	Front	Rear
Available Reserve Pressure (psi)	**1**	**3**
Reserve (under inflation) for 25% TPMS option	**(8)**	**(6)**
Reserve (under inflation) for 30% TPMS option	**(10)**	**(8)**

Reserve (under inflation) in psi



Attachment III.E.

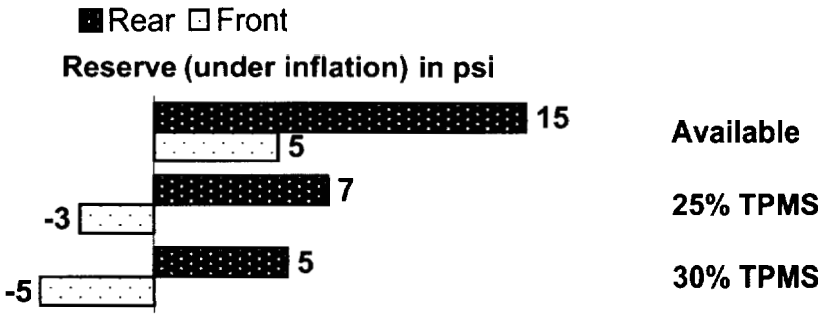
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2000	
Type	SPORTS CAR	Sporty
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)	35	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	220	220
psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 90H
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1049	829	1877
Tire Load	**524**	**414**	

	Front	Rear
Available Reserve Pressure (psi)	**5**	**15**
Reserve (under inflation) for 25% TPMS option	**(3)**	**7**
Reserve (under inflation) for 30% TPMS option	**(5)**	**5**



Attachment III.E.

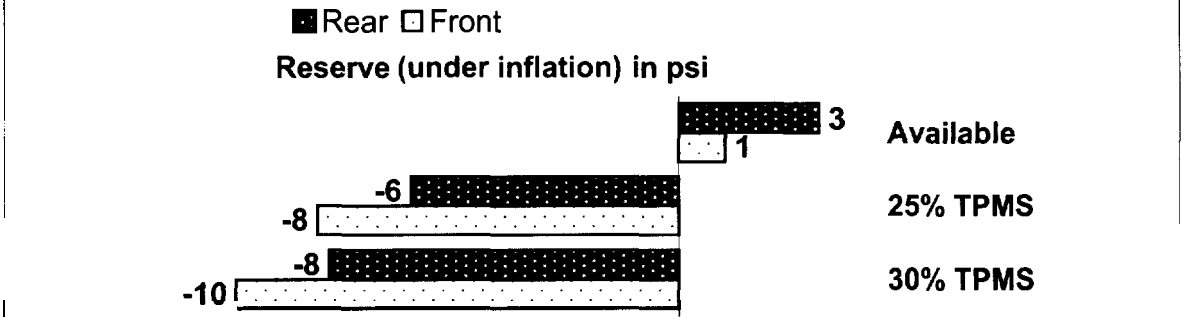
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		ETRTO Standard
Tire Size		215/65R16 98T
Maximum Load (kg)	750	
Pressure (kPa)	250	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1280	1237	2517

	Front	Rear
Available Reserve Pressure (psi)	1	3
Reserve (under inflation) for 25% TPMS option	(8)	(6)
Reserve (under inflation) for 30% TPMS option	(10)	(8)



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

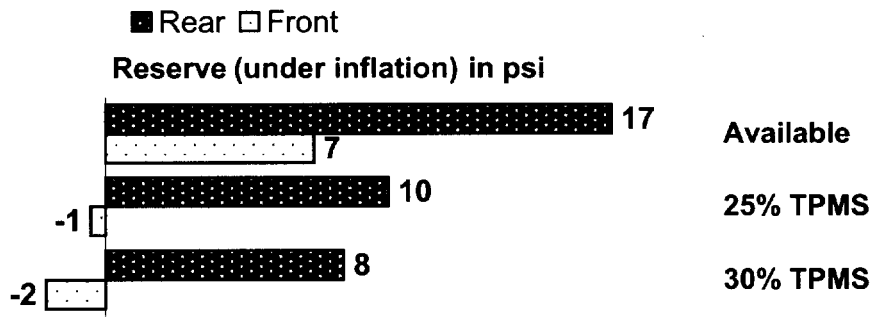
Vehicle Information			
Model Year		2000	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 225/55R17 95V
Maximum Load (kg)	690	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1148	868	2016
Tire Load	**574**	**434**	

*** = data not available; estimated

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	162	93
	psi	23	13
		Front	Rear
Available Reserve Pressure (psi)		**7**	**17**
Reserve (under inflation) for 25% TPMS option		**(1)**	**10**
Reserve (under inflation) for 30% TPMS option		**(2)**	**8**



Attachment III.E.

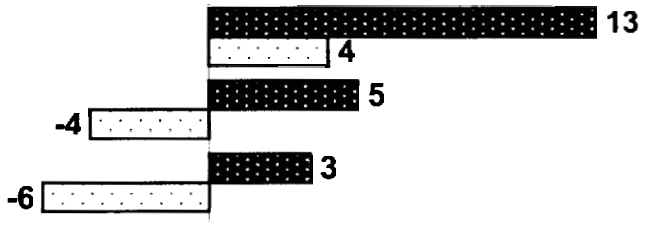
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 185/60R15 84T
Maximum Load (kg)	500
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	898	730	1628
Tire Load	**449**	**365**	

	Front	Rear
Available Reserve Pressure (psi)	**4**	**13**
Reserve (under inflation) for 25% TPMS option	**(4)**	**5**
Reserve (under inflation) for 30% TPMS option	**(6)**	**3**



Attachment III.E.

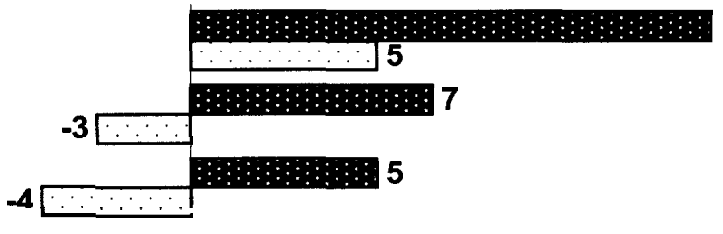
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		MID SIZE	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 195/70R14 90S
Maximum Load (kg)	595
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1011	811	1822
Tire Load	**505**	**405**	

	Front	Rear
Available Reserve Pressure (psi)	**5**	**14**
Reserve (under inflation) for 25% TPMS option	**(3)**	**7**
Reserve (under inflation) for 30% TPMS option	**(4)**	**5**



Attachment III.E.

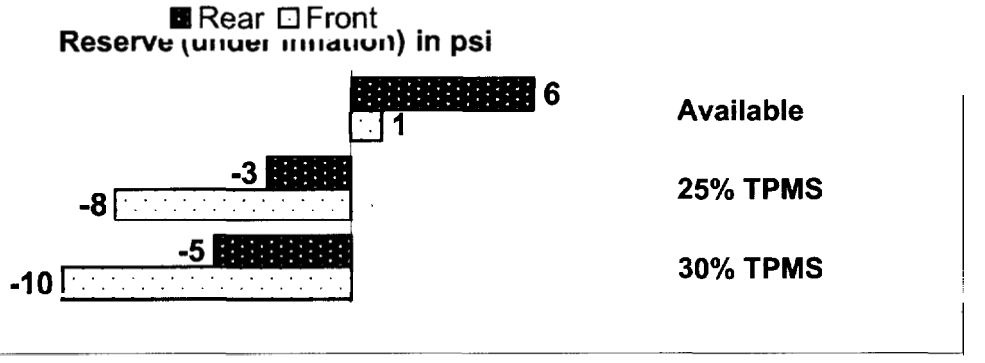
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/65R15 95S
Maximum Load (kg)	685	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1242	1141	2383
Tire Load	**621**	**571**	

	Front	Rear
Available Reserve Pressure (psi)	**1**	**6**
Reserve (under inflation) for 25% TPMS option	**(8)**	**(3)**
Reserve (under inflation) for 30% TPMS option	**(10)**	**(5)**



Attachment III.E.

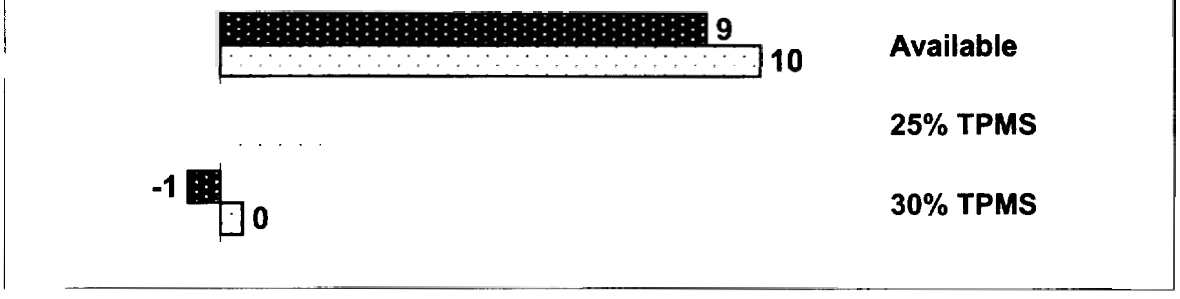
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	FULL SIZE		
Seating (frt/rear)	3	3	
Max Trunk/Cargo Load (kg)	90.7		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60SR16
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1159	1181	2340
Tire Load	**579**	**591**	

	Front	Rear
Available Reserve Pressure (psi)	**10**	**9**
Reserve (under inflation) for 25% TPMS option	**2**	**1**
Reserve (under inflation) for 30% TPMS option	**0**	**(1)**



Attachment III.E.

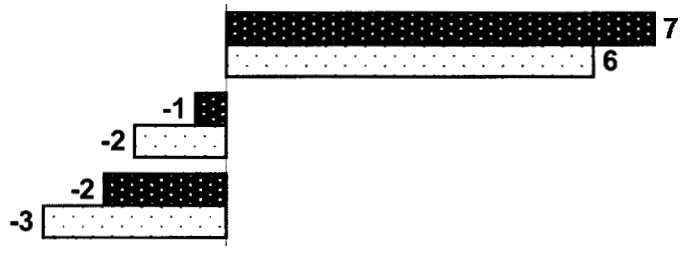
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		SPORTS CAR Sporty	
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		28	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	207	207
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		ETRTO Standard
Tire Size		245/45ZR17
Maximum Load (kg)	690	
Pressure (kPa)	250	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	997	958	1954
Tire Load	**498**	**479**	

	Front	Rear
Available Reserve Pressure (psi)	**6**	**7**
Reserve (under inflation) for 25% TPMS option	**(2)**	**(1)**
Reserve (under inflation) for 30% TPMS option	**(3)**	**(2)**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information				
Model Year		2000		
Type		MID SIZE	Premium	
Seating (frt/rear)		3	3	(3/3)
Max Trunk/Cargo Load (kg)		90.9		
Recommended Tire Pressure @ max veh load (F/R)				
	kPa	207	207	
	psi	30	30	

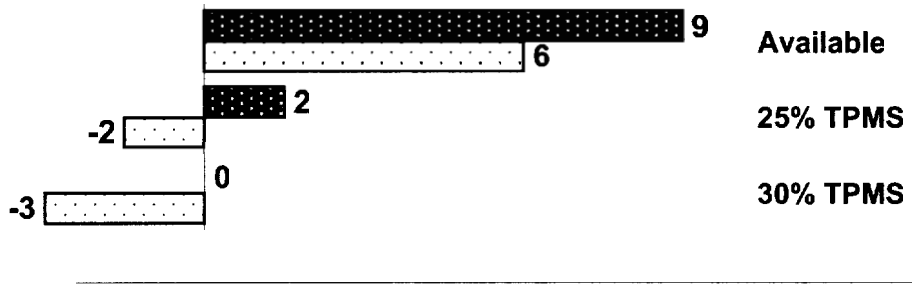
Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16 94T
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1120	1039	2159
Tire Load	**560**	**519**	

not available: estimated

P

	Front	Rear
Available Reserve Pressure (psi)	**6**	**9**
Reserve (under inflation) for 25% TPMS option	**(2)**	**2**
Reserve (under inflation) for 30% TPMS option	**(3)**	**0**



Attachment III.E.

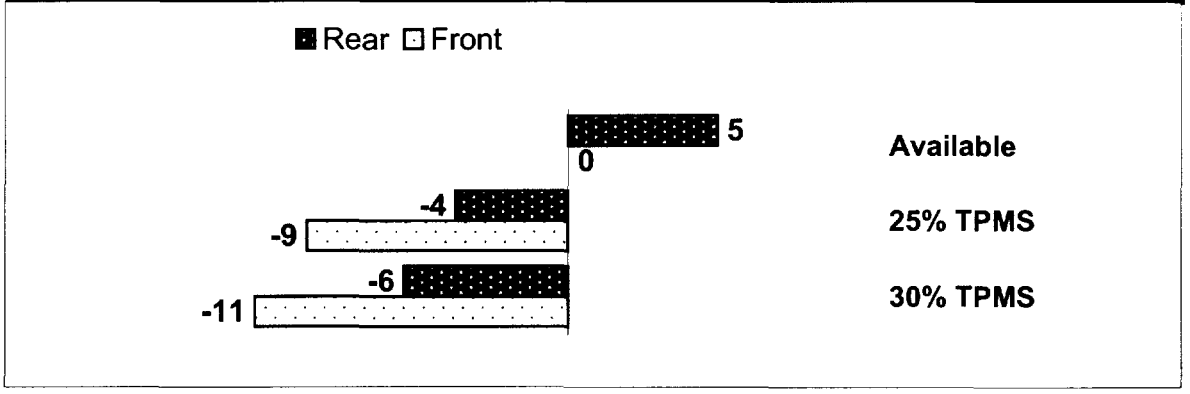
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	68		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1323	1213	2536
Tire Load	**662**	**606**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	244	205
psi	35	30
	Front	Rear
Available Reserve Pressure (psi)	**0**	**5**
Reserve (under inflation) for 25% TPMS option	**(9)**	**(4)**
Reserve (under inflation) for 30% TPMS option	**(11)**	**(6)**



Attachment III.E.

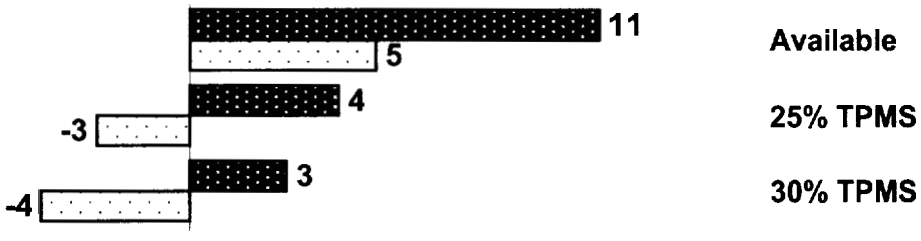
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		LUXURY	Mid
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		90.7	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	207	193
	psi	30	28

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97H
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1219	1006	2225
Tire Load	**610**	**503**	

	Front	Rear
Available Reserve Pressure (psi)	**5**	**11**
Reserve (under inflation) for 25% TPMS option	**(3)**	**4**
Reserve (under inflation) for 30% TPMS option	**(4)**	**3**



Attachment III.E.

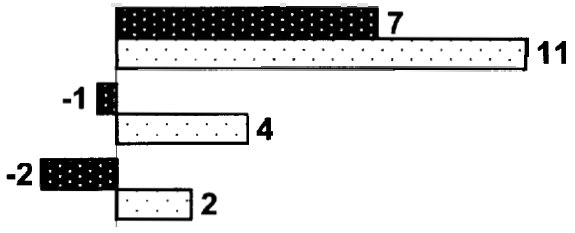
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2000	
Type	LUXURY	Entry
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)	35	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	207	207
psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16 94H
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1000	1093	2093

	Front	Rear
Available Reserve Pressure (psi)	**11**	**7**
Reserve (under inflation) for 25% TPMS option	**4**	**(1)**
Reserve (under inflation) for 30% TPMS option	**2**	**(2)**



Available

25% TPMS

30% TPMS

Attachment III.E.

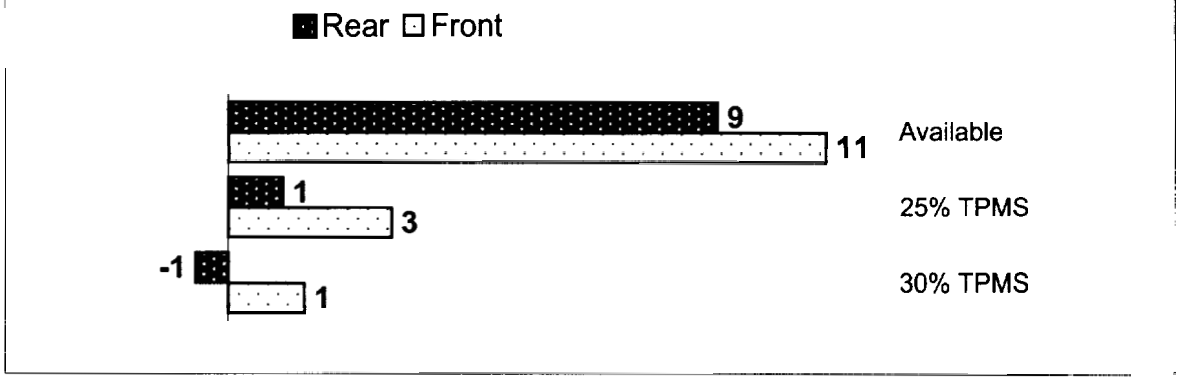
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2000	
Type	LUXURY	Mid
Seating (frt/rear)	3	3
Max Trunk/Cargo Load (kg)	90.7	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	220	220
psi	32	32

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 235/60TR16
Maximum Load (kg)	775	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1191	1247	2439

	Front	Rear
Available Reserve Pressure (psi)	11	9
Reserve (under inflation) for 25% TPMS option	3	1
Reserve (under inflation) for 30% TPMS option	1	(1)



Attachment III.E.

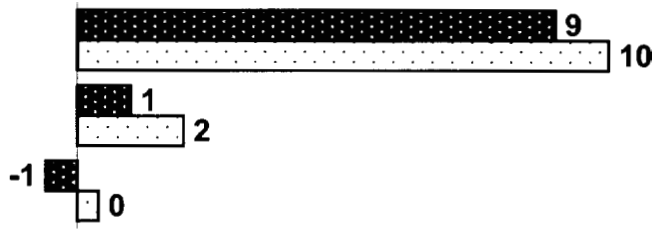
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2000	
Type	FULL SIZE	
Seating (frt/rear)	3	3
Max Trunk/Cargo Load (kg)	90.7	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	220	220
psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60SR16
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1157	1178	2335
Tire Load	579	589	

	Front	Rear
Available Reserve Pressure (psi)	10	9
Reserve (under inflation) for 25% TPMS option	2	1
Reserve (under inflation) for 30% TPMS option	0	(1)



Attachment III.E.

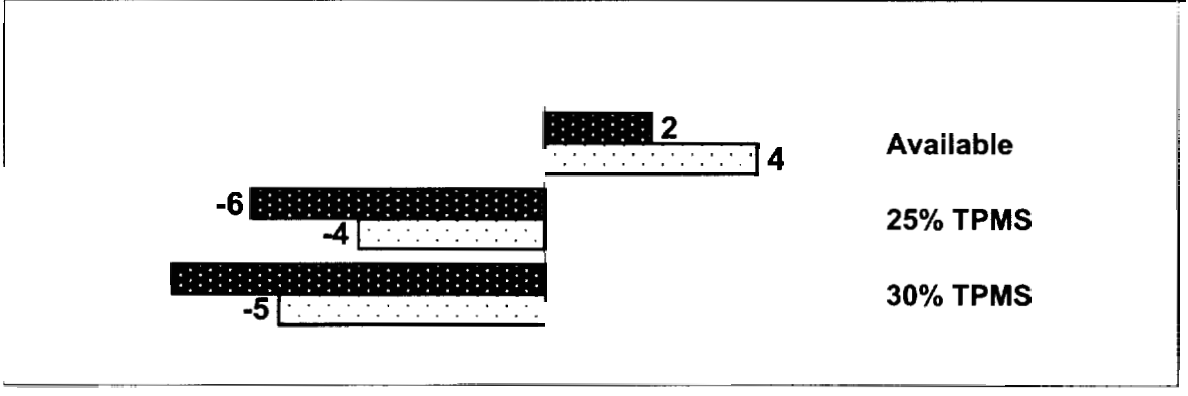
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	MID SIZE	Premium	
Seating (frt/rear)	3	5	(2/3/2)
Max Trunk/Cargo Load (kg)	136.4		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	207	207	
psi	30	30	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16 94T
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1148	1192	2341
Tire Load	**574**	**596**	

	Front	Rear
Available Reserve Pressure (psi)	**4**	**2**
Reserve (under inflation) for 25% TPMS option	**(4)**	**(6)**
Reserve (under inflation) for 30% TPMS option	**(5)**	**(7)**



Attachment III.E.

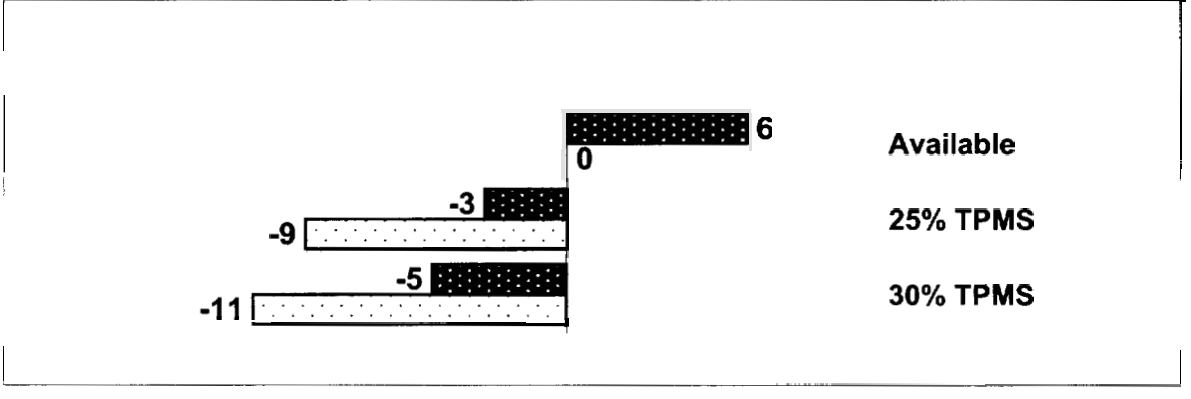
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	70		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97T
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1324	1206	2530

	Front	Rear
Available Reserve Pressure (psi)	0	6
Reserve (under inflation) for 25% TPMS option	(9)	(3)
Reserve (under inflation) for 30% TPMS option	(11)	(5)



Attachment III.E.

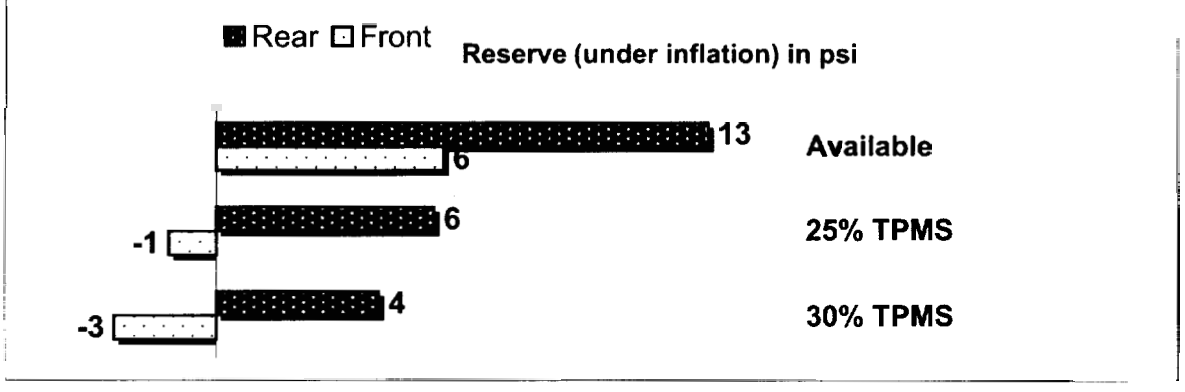
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	MID SIZE	Premium	
Seating (frt/rear)	2	3	
Max Trunk/Cargo Load (kg)	50		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	200	200	
psi	29	29	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/65R15 92H
Maximum Load (kg)	635
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1028	861	1889

	Front	Rear
Available Reserve Pressure (psi)	6	13
Reserve (under inflation) for 25% TPMS option	(1)	6
Reserve (under inflation) for 30% TPMS option	(3)	4



Attachment III.E.

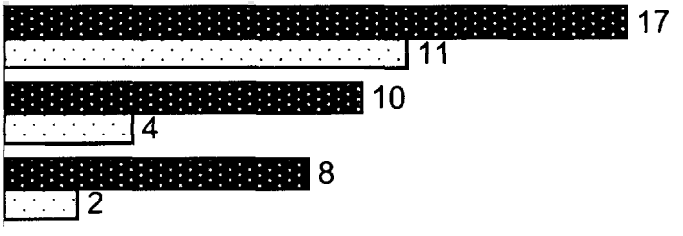
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		MID SIZE	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	200
	psi	30	29

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 205/55R16 89T
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	988	781	1769
Tire Load	**494**	**390**	

	Front	Rear
Available Reserve Pressure (psi)	**11**	**17**
Reserve (under inflation) for 25% TPMS option	**4**	**10**
Reserve (under inflation) for 30% TPMS option	**2**	**8**



Attachment III.E.

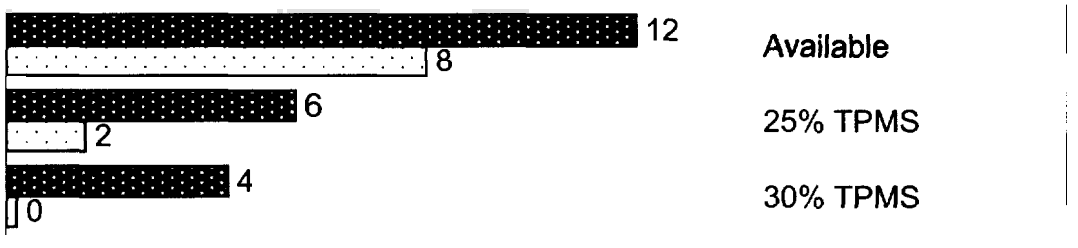
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		PICKUP	Compact
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		164	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	180	180
	psi	26	26

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 255/65R16
Maximum Load (kg)	950
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1237	1097	2333
Tire Load	**618**	**548**	

	Front	Rear
Available Reserve Pressure (psi)	**8**	**12**
Reserve (under inflation) for 25% TPMS option	**2**	**6**
Reserve (under inflation) for 30% TPMS option	**0**	**4**



Attachment III.E.

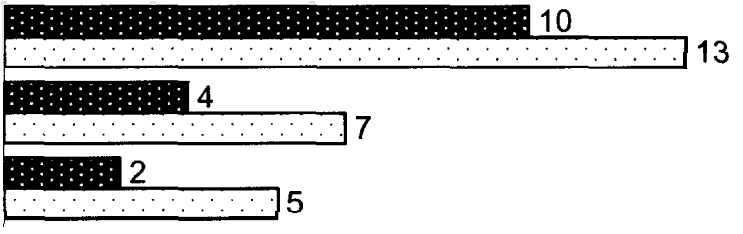
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		SUV	Mid
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	180	180
	psi	26	26

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 265/70R15
Maximum Load (kg)	1060	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Note: Used GAWR for calculations			
Total Axle Load	1179	1293	
Tire Load	**590**	**646**	

	Front	Rear
Available Reserve Pressure (psi)	**13**	**10**
Reserve (under inflation) for 25% TPMS option	**7**	**4**
Reserve (under inflation) for 30% TPMS option	**5**	**2**



Attachment III.E.

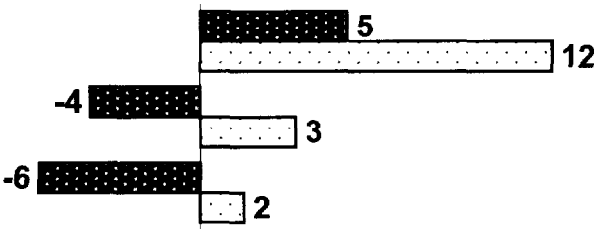
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2000		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	70		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/70R15 97S
Maximum Load (kg)	735
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1102	1252	2353

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	161	208
psi	23	30
	Front	Rear
Available Reserve Pressure (psi)	**12**	**5**
Reserve (under inflation) for 25% TPMS option	**3**	**(4)**
Reserve (under inflation) for 30% TPMS option	**2**	**(6)**



Attachment III.E.

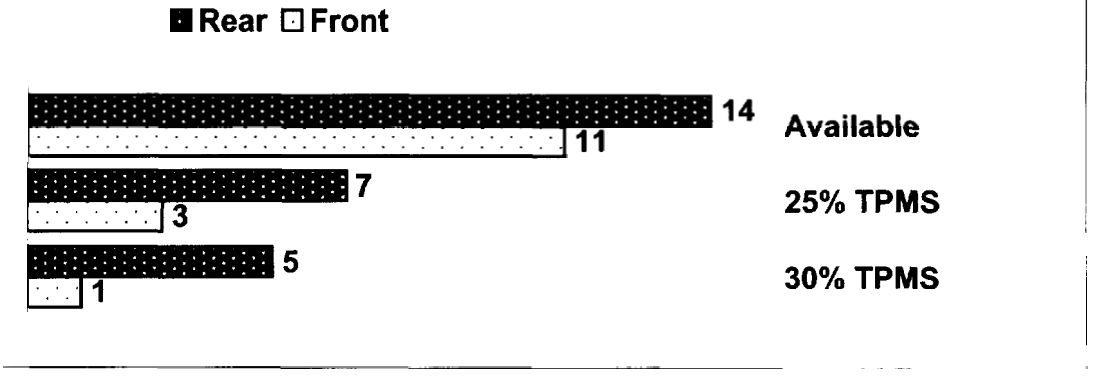
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		50	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	230	210
	psi	33	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 195/60R15 87H
Maximum Load (kg)	540
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	864	746	1611

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	152	113
	psi	22	16
		Front	Rear
Available Reserve Pressure (psi)		11	14
Reserve (under inflation) for 25% TPMS option		3	7
Reserve (under inflation) for 30% TPMS option		1	5



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

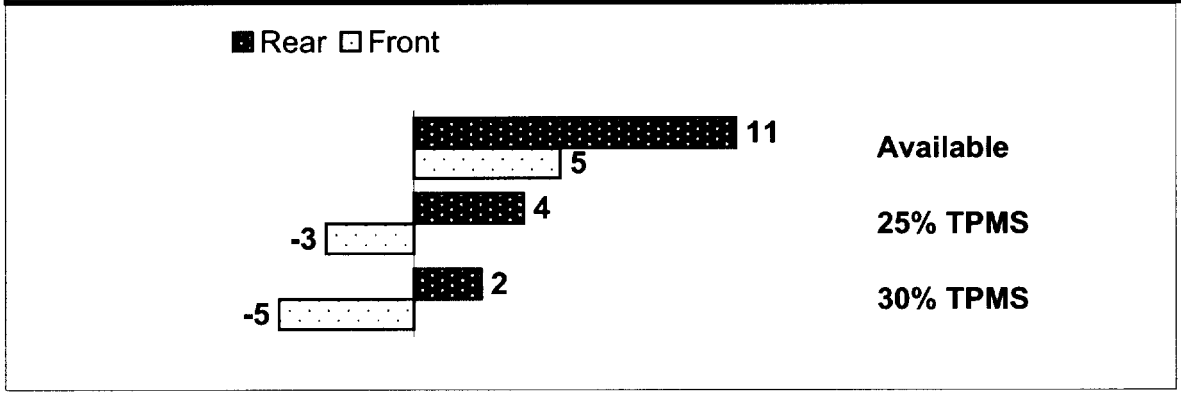
Vehicle Information			
Model Year		2000	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	200
	psi	32	29

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 195/60R15 87H
Maximum Load (kg)	540	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	951	770	1720
Tire Load	**475**	**385**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	184	121
psi	27	18

	Front	Rear
Available Reserve Pressure (psi)	**5**	**11**
Reserve (under inflation) for 25% TPMS option	**(3)**	**4**
Reserve (under inflation) for 30% TPMS option	**(5)**	**2**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

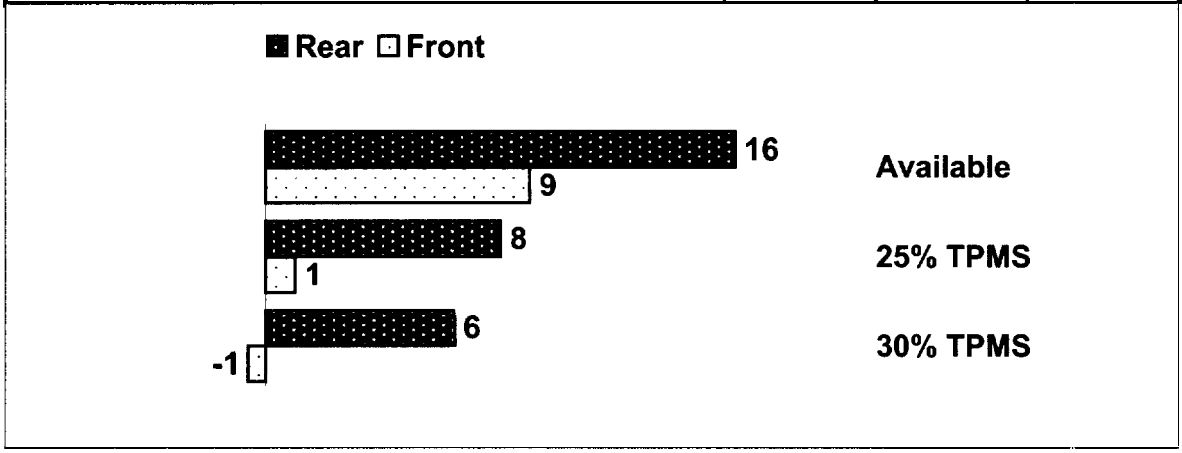
Vehicle Information		
Model Year	2000	
Type	LUXURY	Entry
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)	50	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	220	220
psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/50R17 93V
Maximum Load (kg)	650
Pressure (kPa)	240

Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options	Front	Rear	Total
Total Axle Load	1059	887	1946
Tire Load	**529**	**443**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	161	113
psi	23	16

	Front	Rear
Available Reserve Pressure (psi)	**9**	**16**
Reserve (under inflation) for 25% TPMS option	**1**	**8**
Reserve (under inflation) for 30% TPMS option	**(1)**	**6**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

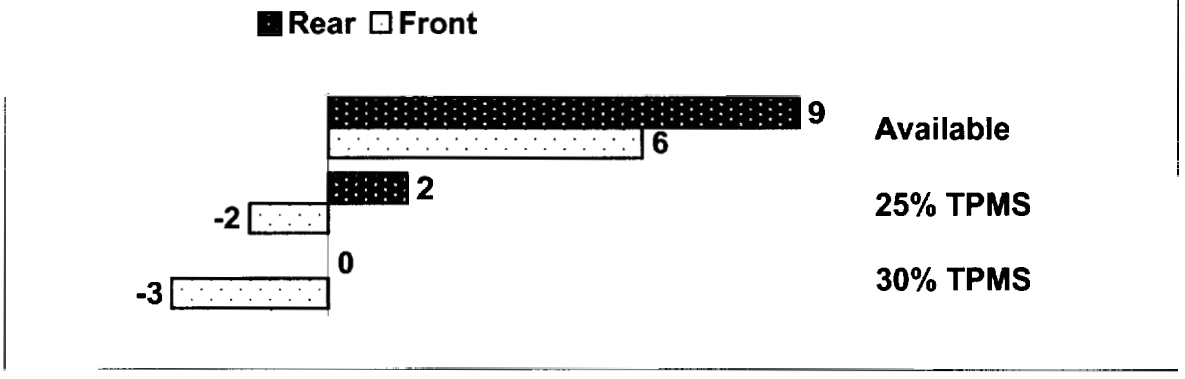
Vehicle Information			
Model Year		2000	
Type		LUXURY	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16 94V
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1116	1050	2165

F

	Front	Rear
Available Reserve Pressure (psi)	6	9
Reserve (under inflation) for 25% TPMS option	(2)	2
Reserve (under inflation) for 30% TPMS option	(3)	0



Attachment III.E.

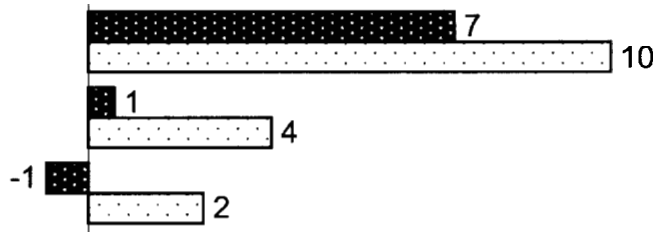
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		SUV	Luxury
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	180	180
	psi	26	26

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 245/70R16
Maximum Load (kg)	950	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Note: Used GAWR for calculations			
Total Axle Load	1179	1293	
Tire Load	**590**	**646**	

	Front	Rear
Available Reserve Pressure (psi)	**10**	**7**
Reserve (under inflation) for 25% TPMS option	**4**	**1**
Reserve (under inflation) for 30% TPMS option	**2**	**(1)**



Attachment III.E.

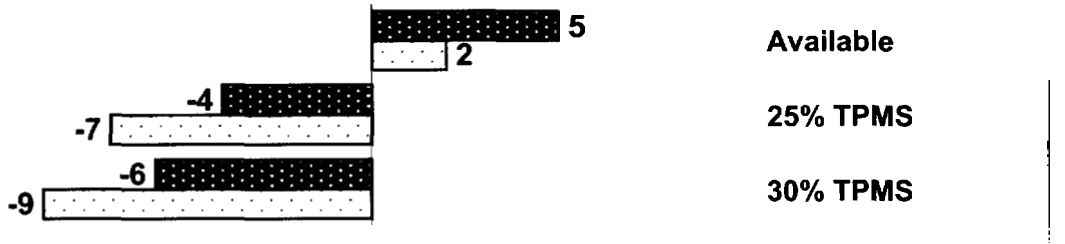
RESERVE PRESSURE CALCULATIONS

Vehicle Information				
Model Year		2001		
Type		VAN	Compact	
Seating (frt/rear)		2	5	(2/2/3)
Max Trunk/Cargo Load (kg)		45		
Recommended Tire Pressure @ max veh load (F/R)				
	kPa	250	250	
	psi	36	36	

Tire Load & Inflation Pressure from Standardizing Body		ETRTO Standard
Tire Size		215/65R15 98S
Maximum Load (kg)	750	
Pressure (kPa)	250	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1300	1200	2500
Tire Load	**650**	**600**	

	Front	Rear
Available Reserve Pressure (psi)	**2**	**5**
Reserve (under inflation) for 25% TPMS option	**(7)**	**(4)**
Reserve (under inflation) for 30% TPMS option	**(9)**	**(6)**



Attachment III.E.

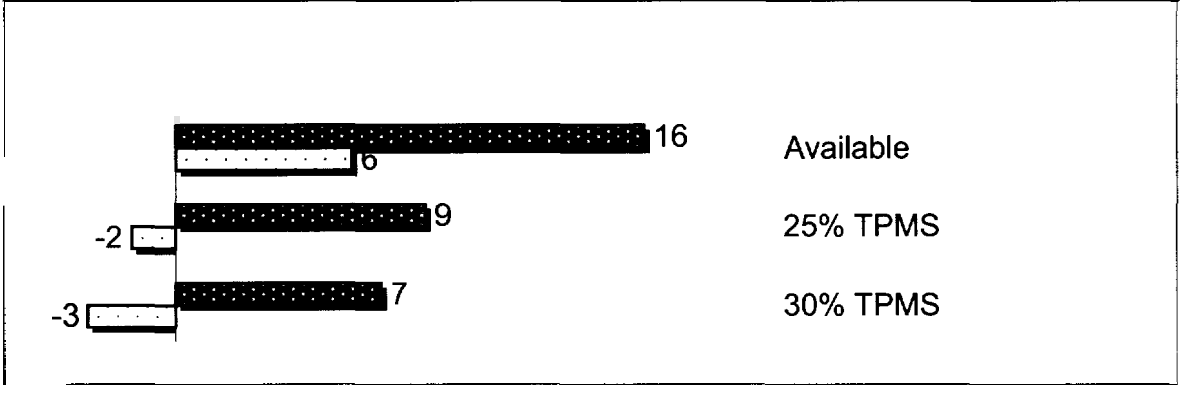
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/55R17 95T
Maximum Load (kg)	690
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1162	882	2044
Tire Load	**581**	**441**	

	Front	Rear
Available Reserve Pressure (psi)	**6**	**16**
Reserve (under inflation) for 25% TPMS option	**(2)**	**9**
Reserve (under inflation) for 30% TPMS option	**(3)**	**7**



Attachment III.E.

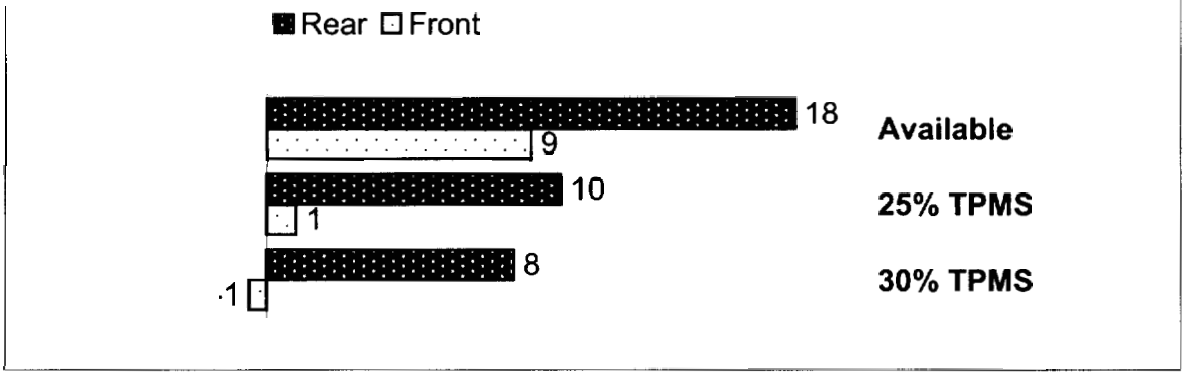
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	FULL SIZE		
Seating (frt/rear)	3	3	
Max Trunk/Cargo Load (kg)	52		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 225/60R16 97T
Maximum Load (kg)	730	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1185	911	2097

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	162	96
psi	23	14
	Front	Rear
Available Reserve Pressure (psi)	**9**	**18**
Reserve (under inflation) for 25% TPMS option	**1**	**10**
Reserve (under inflation) for 30% TPMS option	**(1)**	**8**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	234	234
	psi	34	34

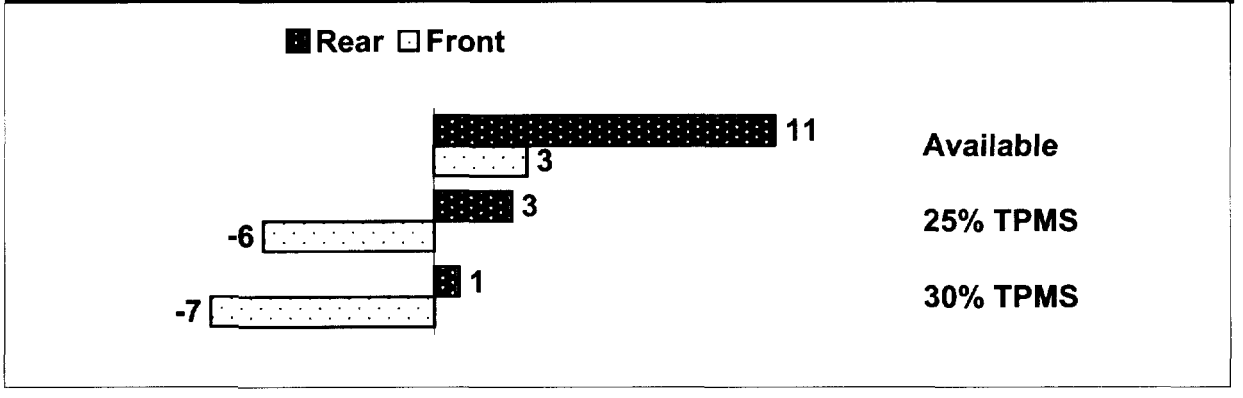
Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 195/65R15 89T
Maximum Load (kg)	580	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1005	871	1876
Tire Load	**503**	**435**	

*** = data not available; estimated

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	216	162
psi	31	23

	Front	Rear
Available Reserve Pressure (psi)	**3**	**11**
Reserve (under inflation) for 25% TPMS option	**(6)**	**3**
Reserve (under inflation) for 30% TPMS option	**(7)**	**1**



Attachment III.E.

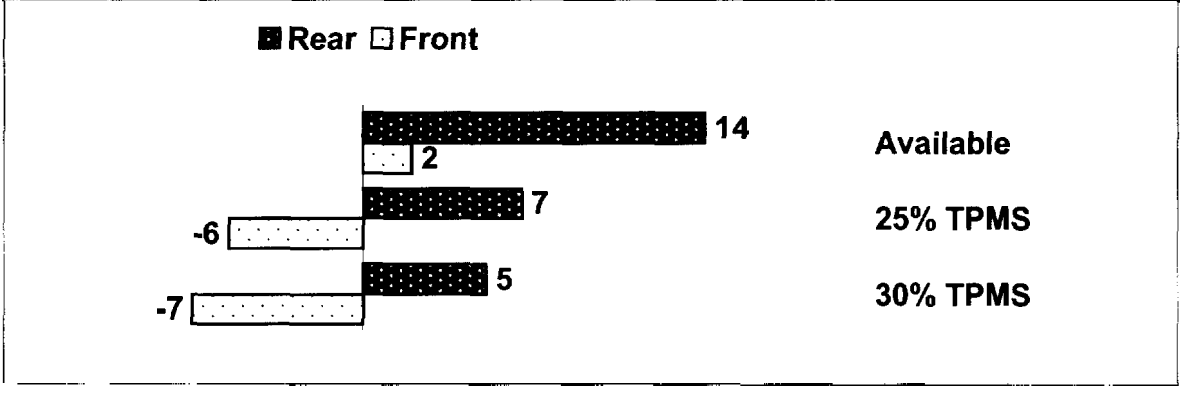
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		MID SIZE	Premium
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 205/60R16 91T
Maximum Load (kg)	615	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1104	828	1931
Tire Load	552	414	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	192	108
	psi	28	16
		Front	Rear
Available Reserve Pressure (psi)		2	14
Reserve (under inflation) for 25% TPMS option		(6)	7
Reserve (under inflation) for 30% TPMS option		(7)	5



Attachment III.E.

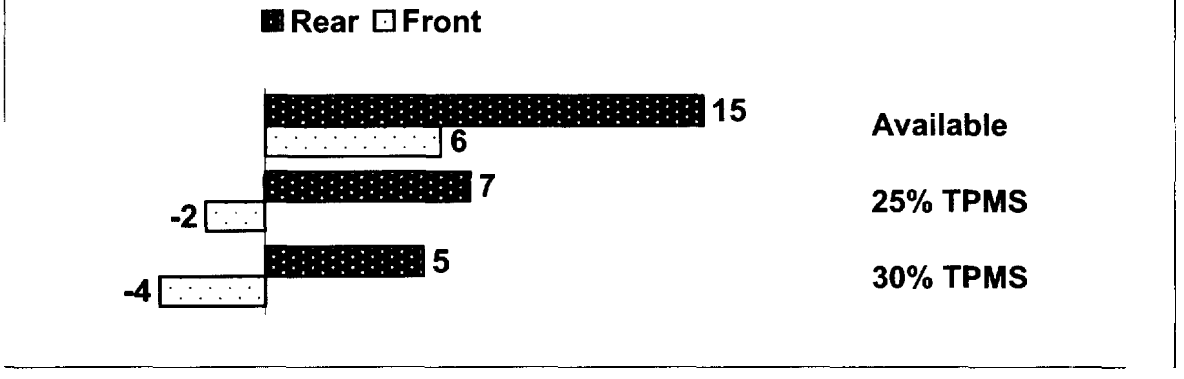
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		SPORTS CAR	Sporty
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		35	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 90H
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1038	836	1874
Tire Load	519	418	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	179	116
	psi	26	17
		Front	Rear
Available Reserve Pressure (psi)		6	15
Reserve (under inflation) for 25% TPMS option		(2)	7
Reserve (under inflation) for 30% TPMS option		(4)	5



Attachment III.E.

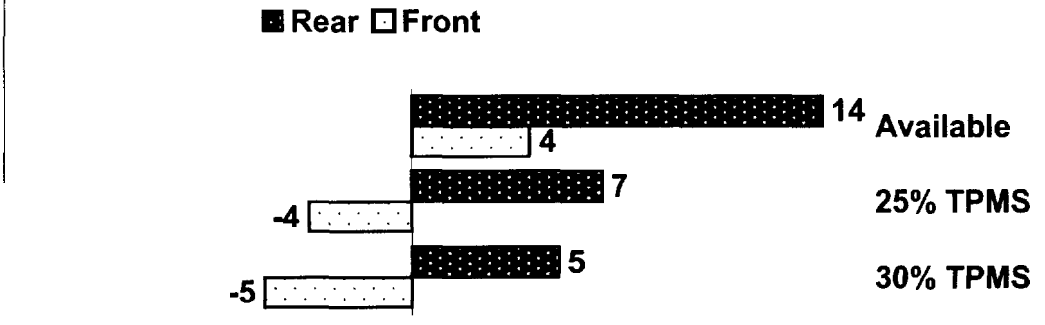
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/60R16 91T
Maximum Load (kg)	615
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1070	847	1917
Tire Load	**535**	**423**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	180	113
	psi	26	16
		Front	Rear
Available Reserve Pressure (psi)		**4**	**14**
Reserve (under inflation) for 25% TPMS option		**(4)**	**7**
Reserve (under inflation) for 30% TPMS option		**(5)**	**5**



Attachment III.E.

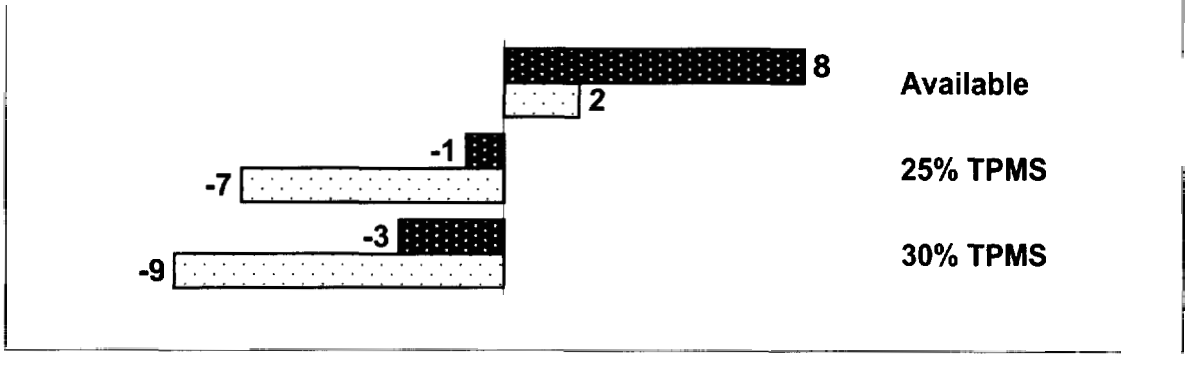
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	250	250	
psi	36	36	

Tire Load & Inflation Pressure from Standardizing Body	ETRTO Standard
Tire Size	215/70R15 98S
Maximum Load (kg)	750
Pressure (kPa)	250

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1284	1116	2400
Tire Load	**642**	**558**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	233	195
psi	34	28
	Front	Rear
Available Reserve Pressure (psi)	**2**	**8**
Reserve (under inflation) for 25% TPMS option	**(7)**	**(1)**
Reserve (under inflation) for 30% TPMS option	**(9)**	**(3)**



Attachment III.E.

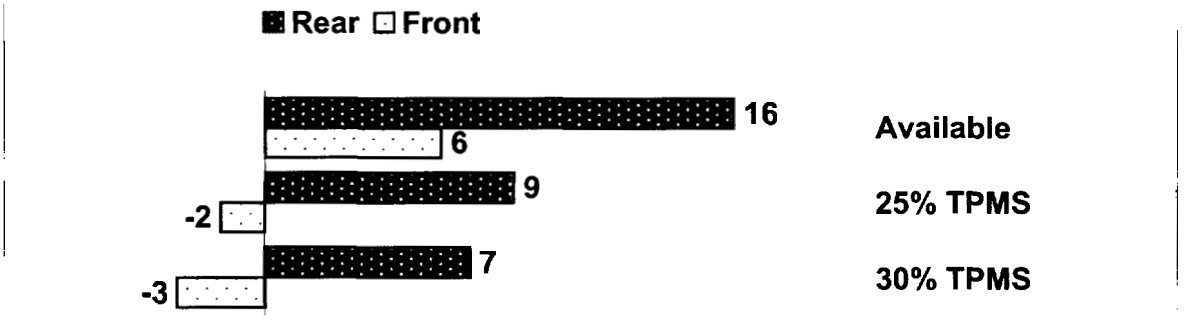
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/55R17 95V
Maximum Load (kg)	690
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1166	882	2048
Tire Load	**583**	**441**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	167	96
	psi	24	14
		Front	Rear
Available Reserve Pressure (psi)		**6**	**16**
Reserve (under inflation) for 25% TPMS option		**(2)**	**9**
Reserve (under inflation) for 30% TPMS option		**(3)**	**7**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

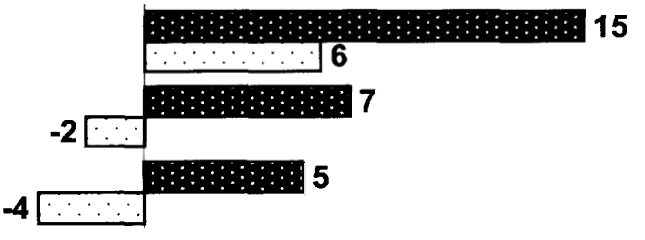
Vehicle Information			
Model Year		2001	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		35	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 90H
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1039	836	1875

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	180	116
psi	26	17

	Front	Rear
Available Reserve Pressure (psi)	**6**	**15**
Reserve (under inflation) for 25% TPMS option	**(2)**	**7**
Reserve (under inflation) for 30% TPMS option	**(4)**	**5**



Attachment III.E.

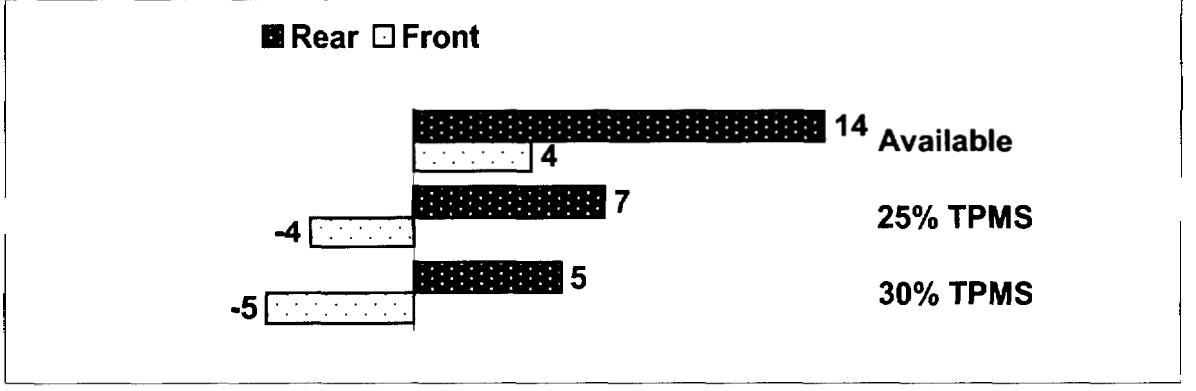
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/60R16 91T
Maximum Load (kg)	615
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1070	838	1908
Tire Load	**535**	**419**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	180	110
	psi	26	16
		Front	Rear
Available Reserve Pressure (psi)		**4**	**14**
Reserve (under inflation) for 25% TPMS option		**(4)**	**7**
Reserve (under inflation) for 30% TPMS option		**(5)**	**5**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

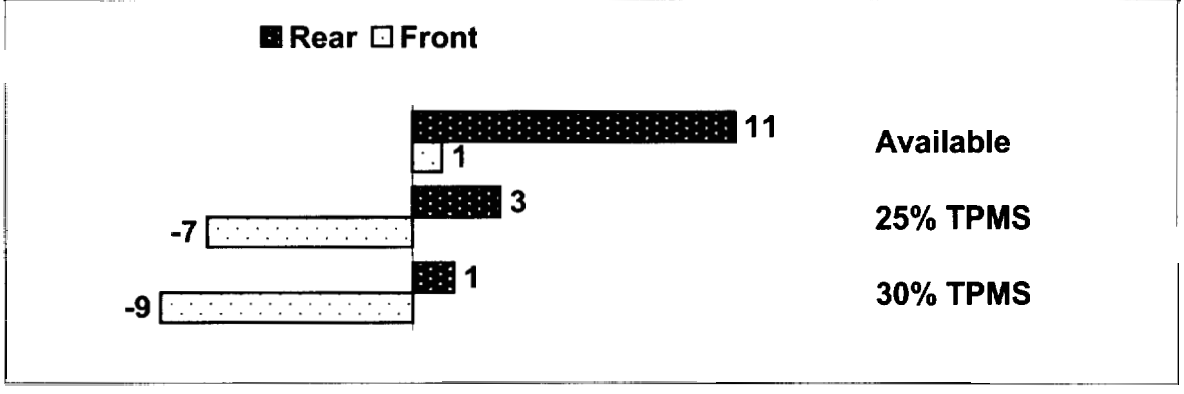
Vehicle Information			
Model Year		2001	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		52	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 195/50R16 83V
Maximum Load (kg)	487	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	931	766	1697
Tire Load	**465**	**383**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	216	146

	Front	Rear
Available Reserve Pressure (psi)	1	11
Reserve (under inflation) for 25% TPMS option	(7)	3
Reserve (under inflation) for 30% TPMS option	(9)	1



Attachment III.E.

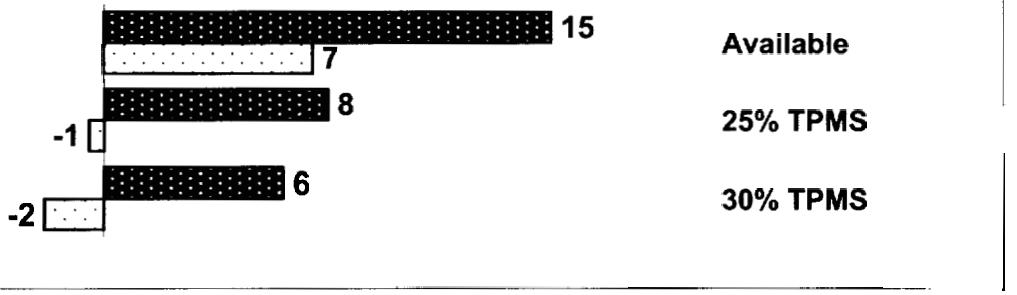
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		90.9	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	207	207
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16 94T
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1083	881	1964
Tire Load	**541**	**440**	

	Front	Rear
Available Reserve Pressure (psi)	**7**	**15**
Reserve (under inflation) for 25% TPMS option	**(1)**	**8**
Reserve (under inflation) for 30% TPMS option	**(2)**	**6**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

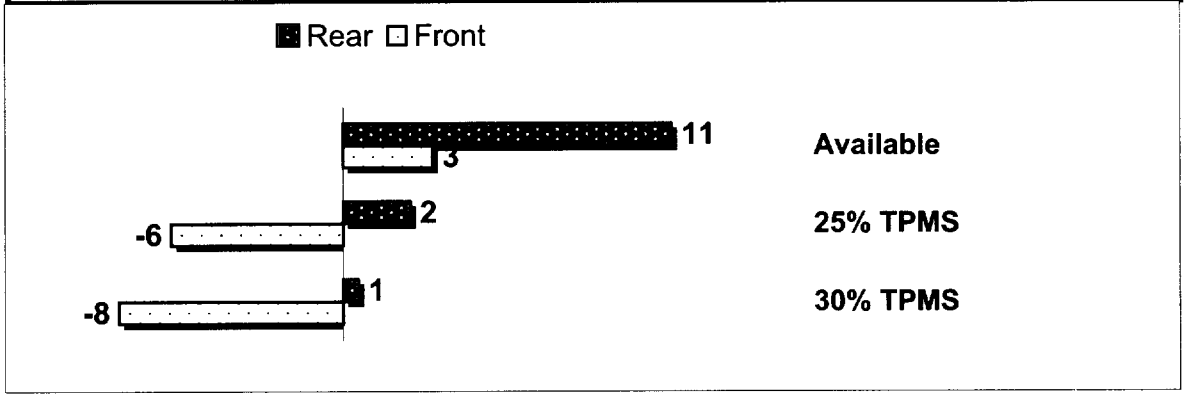
Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	68		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size	P 215/70R15	
Maximum Load (kg)	735	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1285	1109	2395
Tire Load	**643**	**555**	

*** = data not available; estimated

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	220	164
psi	32	24
	Front	Rear
Available Reserve Pressure (psi)	**3**	**11**
Reserve (under inflation) for 25% TPMS option	**(6)**	**2**
Reserve (under inflation) for 30% TPMS option	**(8)**	**1**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

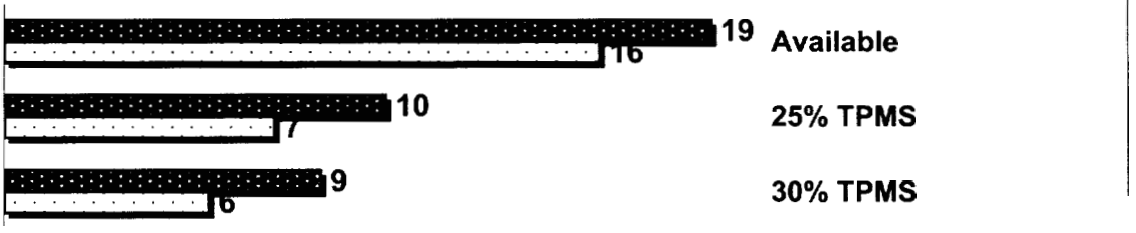
Vehicle Information			
Model Year		2001	
Type		SPORTS CAR	Sporty
Seating (frt/rear)		**2**	**2**
Max Trunk/Cargo Load (kg)		28	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	240	240
	psi	35	35

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 205/65R15 92T
Maximum Load (kg)	635	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	943	873	1815
Tire Load	**471**	**436**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	132	113

	Front	Rear
Available Reserve Pressure (psi)	**16**	**19**
Reserve (under inflation) for 25% TPMS option	**7**	**10**
Reserve (under inflation) for 30% TPMS option	**6**	**9**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

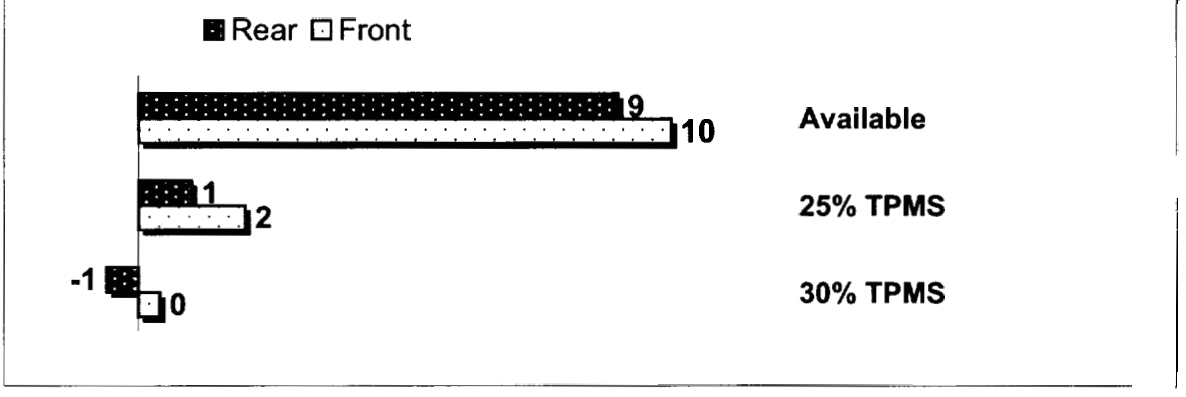
Vehicle Information			
Model Year		2001	
Type		FULL SIZE	
Seating (frt/rear)		3	3
Max Trunk/Cargo Load (kg)		90.7	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60SR16
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1152	1178	2330
Tire Load	**576**	**589**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	
kPa	153	160

	Front	Rear
Available Reserve Pressure (psi)	**10**	**9**
Reserve (under inflation) for 25% TPMS option	**2**	**1**
Reserve (under inflation) for 30% TPMS option	**0**	**(1)**



Attachment III.E.

Vehicle Information			
Model Year	2001		
Type	SPORTS CAR	Sporty	
Seating (frt/rear)	2	2	
Max Trunk/Cargo Load (kg)	28		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

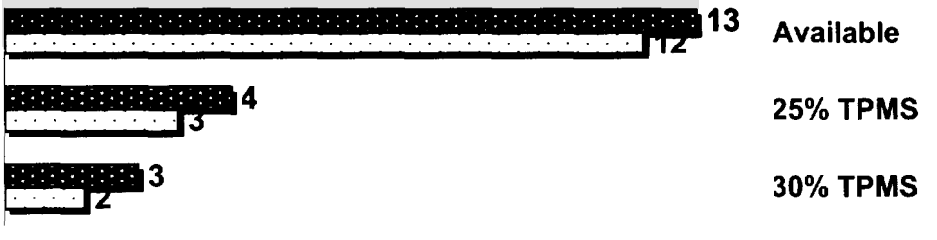
Tire Load & Inflation Pressure from Standardizing Body	ETRTO Standard*
Tire Size	245/45R17 97T
Maximum Load (kg)	690
Pressure (kPa)	250

* Note: ETRTO only lists 95 & +4 for REINF;used 95

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	976	912	1887
Tire Load	**488**	**456**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	**162**	149
psi	23	22
	Front	Rear
Available Reserve Pressure (psi)	**12**	**13**
Reserve (under inflation) for 25% TPMS option	**3**	**4**
Reserve (under inflation) for 30% TPMS option	**2**	**3**

■ Rear □ Front



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		LUXURY	Mid
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		90.7	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	207	193
	psi	30	28

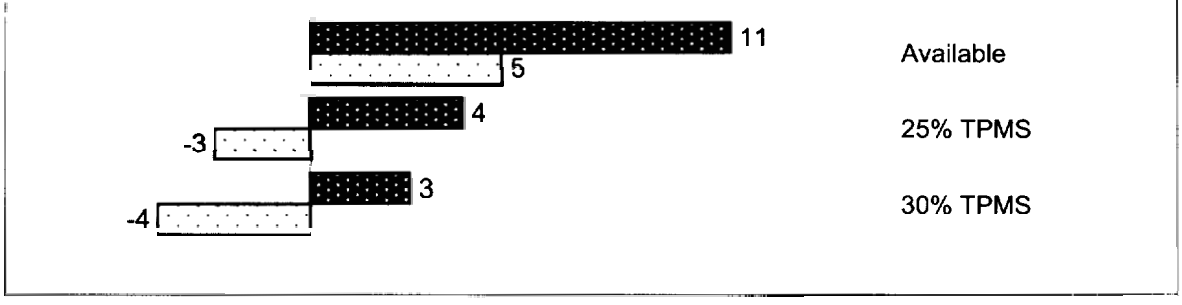
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97H
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1220	1005	2225
Tire Load	**610**	**502**	

*** = data not available; estimated

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	171	116

	Front	Rear
Available Reserve Pressure (psi)	**5**	**11**
Reserve (under inflation) for 25% TPMS option	**(3)**	**4**
Reserve (under inflation) for 30% TPMS option	**(4)**	**3**



Attachment III.E.

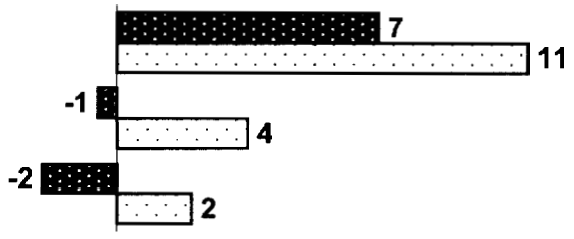
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2001	
Type	LUXURY	Entry
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)	35	
Recommended Tire Pressure @ max veh load (F/R)		
kPa	207	207
psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16 94V
Maximum Load (kg)	670	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1000	1093	2093
Tire Load	**500**	**546**	

	Front	Rear
Available Reserve Pressure (psi)	**11**	**7**
Reserve (under inflation) for 25% TPMS option	**4**	**(1)**
Reserve (under inflation) for 30% TPMS option	**2**	**(2)**



Attachment III.E.

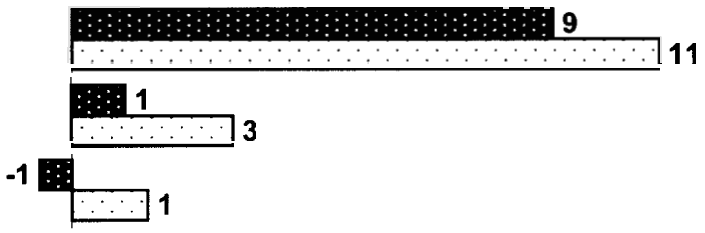
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		LUXURY	Mid
Seating (frt/rear)		3	3
Max Trunk/Cargo Load (kg)		90.7	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 235/60TR16
Maximum Load (kg)	775
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1191	1247	2439
Tire Load	596	624	

	Front	Rear
Available Reserve Pressure (psi)	11	9
Reserve (under inflation) for 25% TPMS option	3	1
Reserve (under inflation) for 30% TPMS option	1	(1)



Attachment III.E.

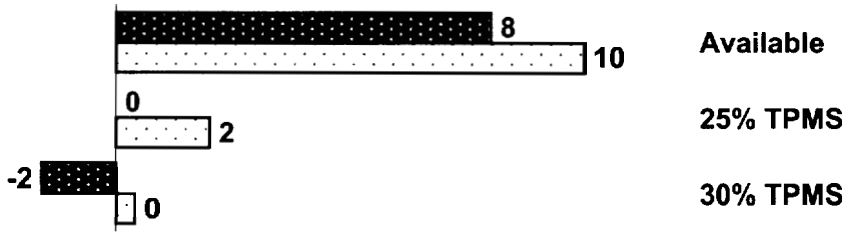
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	FULL SIZE		
Seating (frt/rear)	3	3	
Max Trunk/Cargo Load (kg)	90.7		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 225/60SR16
Maximum Load (kg)	730	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1156	1194	2350
Tire Load	**578**	**597**	

	Front	Rear
Available Reserve Pressure (psi)	10	8
Reserve (under inflation) for 25% TPMS option	2	0
Reserve (under inflation) for 30% TPMS option	0	(2)



Attachment III.E.

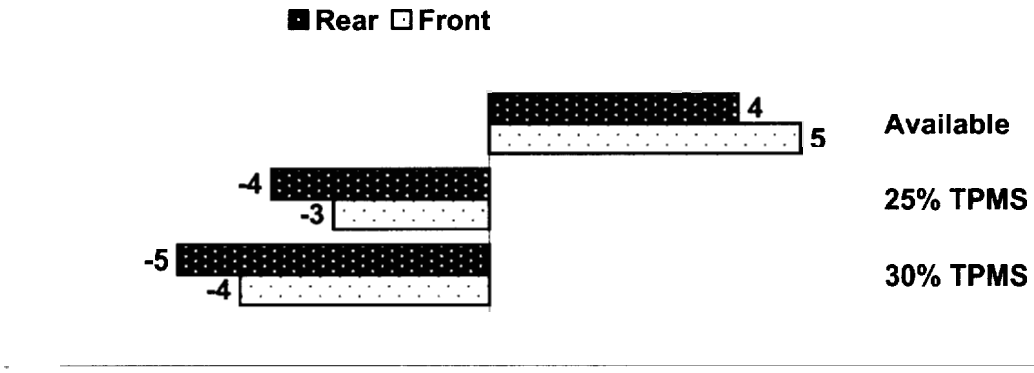
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	MID SIZE	Premium	
Seating (frt/rear)	3	5	(3/3/2)
Max Trunk/Cargo Load (kg)	136.4		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	207	207	
psi	30	30	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/60R16 94T
Maximum Load (kg)	670
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1139	1166	2305

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	174	182
psi	25	26
	Front	Rear
Available Reserve Pressure (psi)	**5**	**4**
Reserve (under inflation) for 25% TPMS option	**(3)**	**(4)**
Reserve (under inflation) for 30% TPMS option	**(4)**	**(5)**



Attachment III.E.

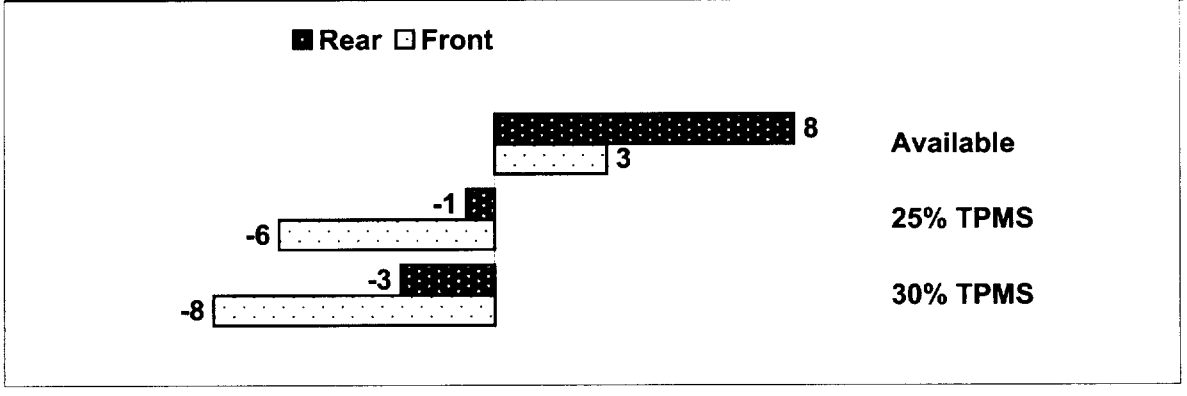
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)	70		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/60R16 97T
Maximum Load (kg)	730
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1253	1157	2410
Tire Load	**626**	**579**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	219	187
psi	32	27
	Front	Rear
Available Reserve Pressure (psi)	**3**	**8**
Reserve (under inflation) for 25% TPMS option	**(6)**	**(1)**
Reserve (under inflation) for 30% TPMS option	**(8)**	**(3)**



Attachment III.E.

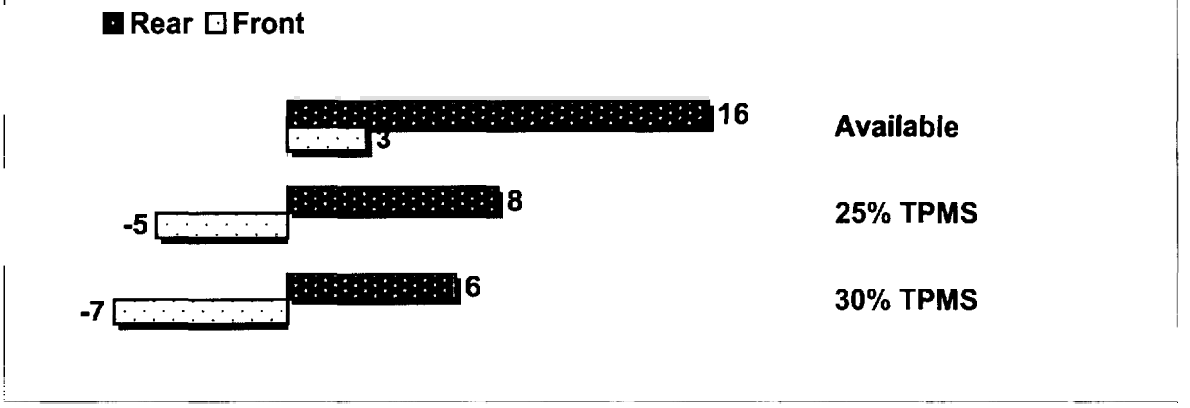
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		LUXURY	Entry
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 93V
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1100	816	1916
Tire Load	**550**	**408**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	202	111
	psi	29	16
		Front	Rear
Available Reserve Pressure (psi)		**3**	**16**
Reserve (under inflation) for 25% TPMS option		**(5)**	**8**
Reserve (under inflation) for 30% TPMS option		**(7)**	**6**



Attachment III.E.

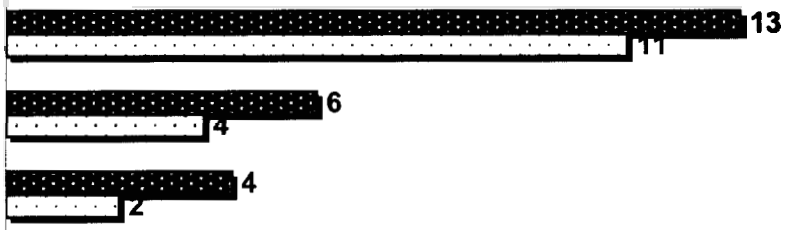
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		COMPACT	Premium
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 185/70R14 87S
Maximum Load (kg)	545	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	812	749	1561
Tire Load	**406**	**374**	

	Front	Rear
Available Reserve Pressure (psi)	**11**	**13**
Reserve (under inflation) for 25% TPMS option	**4**	**6**
Reserve (under inflation) for 30% TPMS option	**2**	**4**



Attachment III.E.

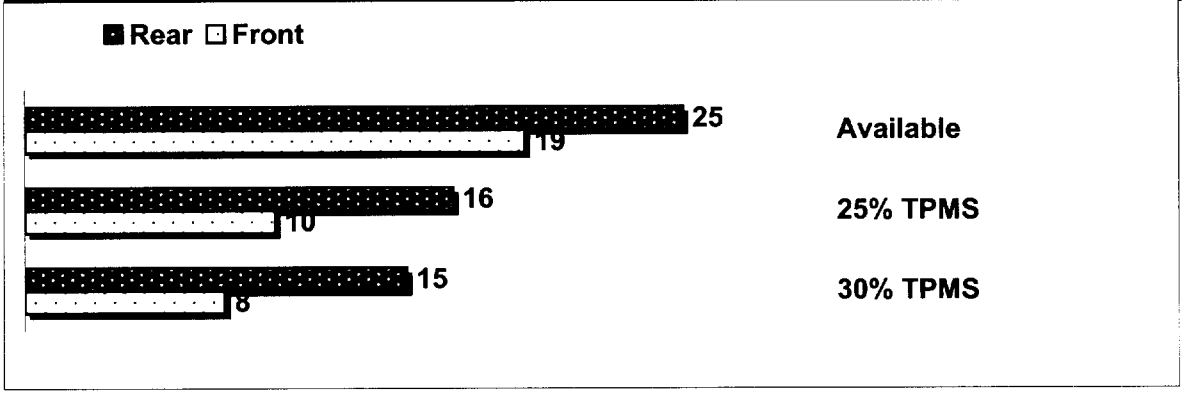
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		COMPACT	Premium
Seating (frt/rear)		2	0
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	260	240
	psi	38	35

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 165/65R14 78S
Maximum Load (kg)	425
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	627	463	1090
Tire Load	**313**	**232**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	133	72
	psi	19	10
		Front	Rear
Available Reserve Pressure (psi)		**19**	**25**
Reserve (under inflation) for 25% TPMS option		**10**	**16**
Reserve (under inflation) for 30% TPMS option		**8**	**15**



Attachment III.E.

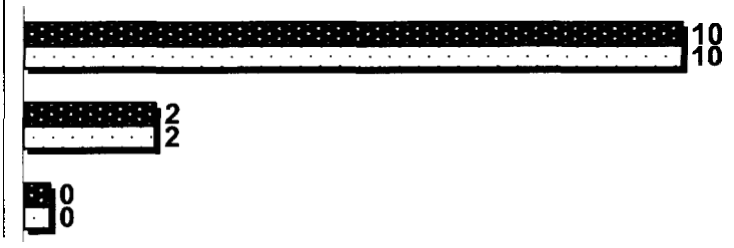
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	SUV	Luxury	
Seating (frt/rear)	2	5	(2/3/2)
Max Trunk/Cargo Load (kg)	49		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 235/65R17 103T
Maximum Load (kg)	875	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1268	1262	2530
Tire Load	634	631	

	Front	Rear
Available Reserve Pressure (psi)	10	10
Reserve (under inflation) for 25% TPMS option	2	2
Reserve (under inflation) for 30% TPMS option	0	0



Attachment III.E.

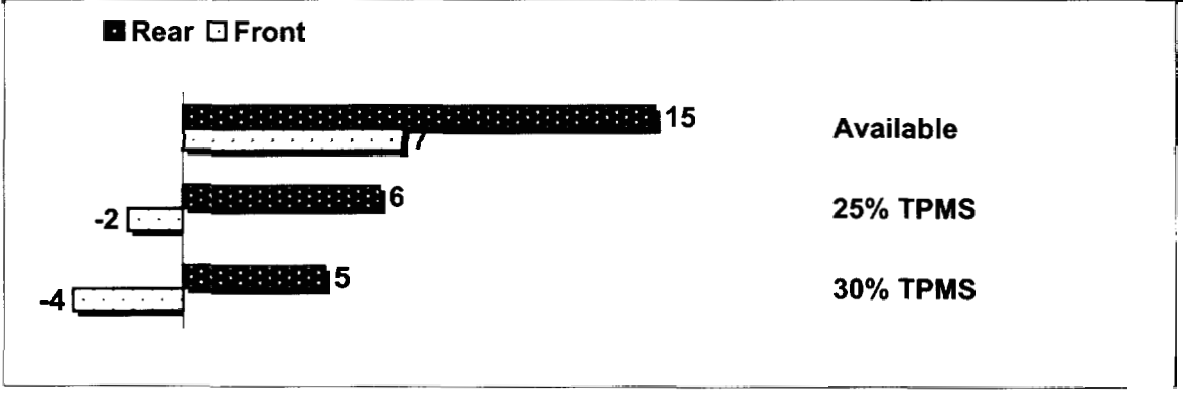
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		SPORTS CAR	Sporty
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	240	240
	psi	35	35

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 195/55R15 84V
Maximum Load (kg)	500	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	894	764	1658
Tire Load	**447**	**382**	

	Front	Rear
Available Reserve Pressure (psi)	**7**	**15**
Reserve (under inflation) for 25% TPMS option	**(2)**	**6**
Reserve (under inflation) for 30% TPMS option	**(4)**	**5**



Attachment III.E.

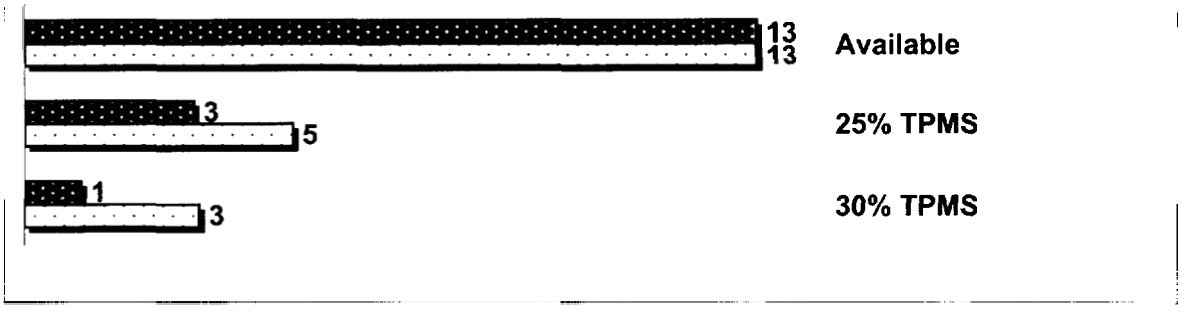
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	SPORTS CAR Premium		
Seating (frt/rear)	2	0	
Max Trunk/Cargo Load (kg)	45		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	230	275	
psi	33	40	

Tire Load & Inflation Pressure from Standardizing Body		ETRTO Standard
Tire Size		215/45ZR16
Maximum Load (kg)	530	
Pressure (kPa)	250	
Tire Size		245/40ZR17
Maximum Load (kg)	615	
Pressure (kPa)	250	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	659	977	1636

	Front	Rear
Available Reserve Pressure (psi)	**13**	**13**
Reserve (under inflation) for 25% TPMS option	**5**	**3**
Reserve (under inflation) for 30% TPMS option	**3**	**1**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

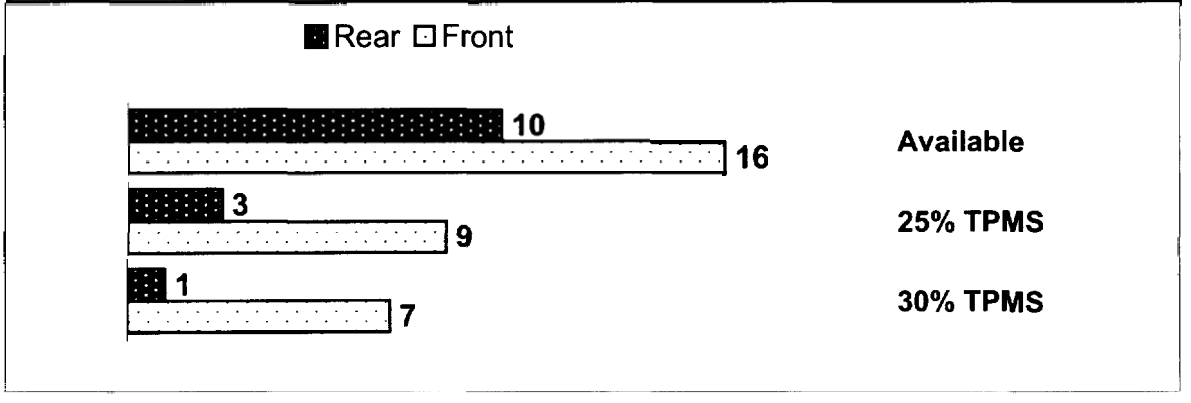
Vehicle Information		
Model Year	2002	
Type	LUXURY	Entry
Seating (frt/rear)	2	0
Max Trunk/Cargo Load (kg)	35	
Recommended Tire Pressure @ max veh load (F/R)*		
kPa	207	207
psi	30	30

* = NOT ADJUSTED FOR MAX VEHICLE SPEED

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 235/50R17 95V
Maximum Load (kg)	690
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	884	1044	1928
Tire Load	442	522	

	Front	Rear
Available Reserve Pressure (psi)	16	10
Reserve (under inflation) for 25% TPMS option	9	3
Reserve (under inflation) for 30% TPMS option	7	1



Attachment III.E.

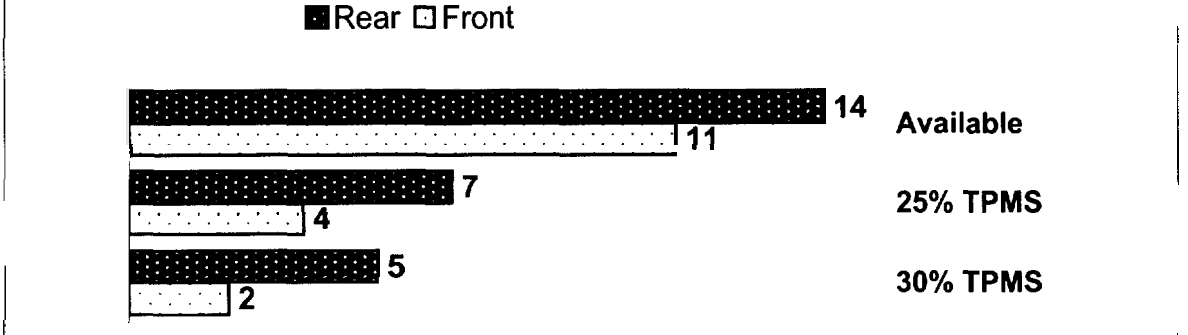
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 185/70R14 87S
Maximum Load (kg)	545
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	808	738	1546

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	133	111
	psi		16
		Front	Rear
Available Reserve Pressure (psi)		11	14
Reserve (under inflation) for 25% TPMS option		4	7
Reserve (under inflation) for 30% TPMS option		2	5



Attachment III.E.

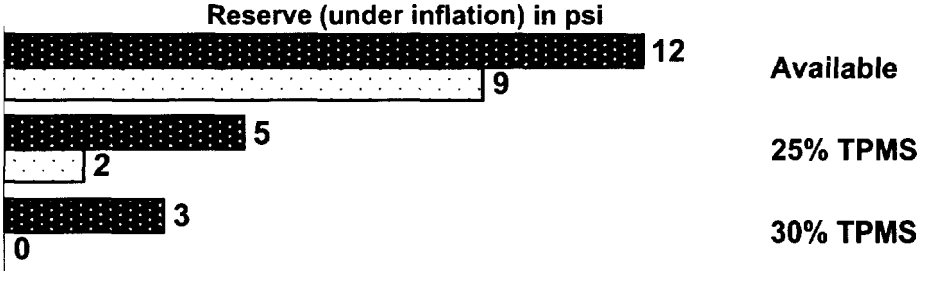
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 185/65R15 86H
Maximum Load (kg)	530	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	826	755	1581
Tire Load	**413**	**377.5**	

	Front	Rear
Available Reserve Pressure (psi)	**9**	**12**
Reserve (under inflation) for 25% TPMS option	**2**	**5**
Reserve (under inflation) for 30% TPMS option	**0**	**3**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

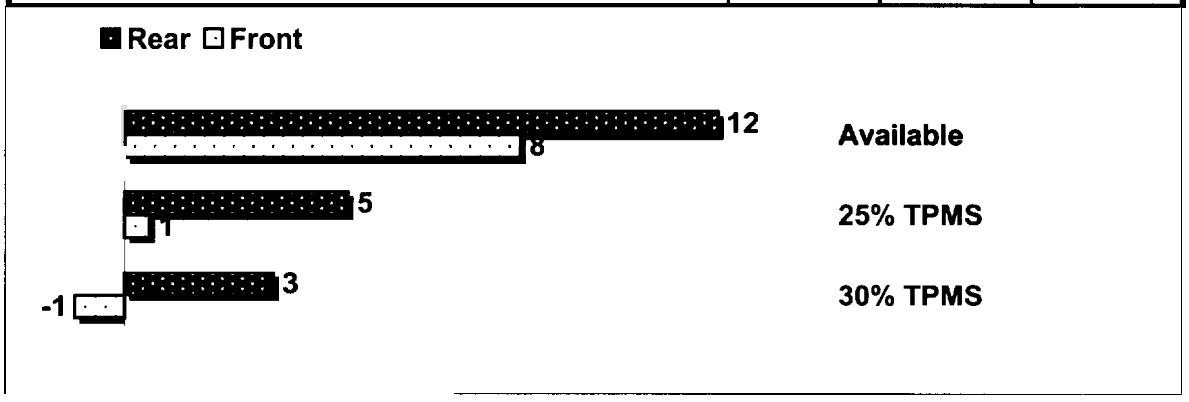
Vehicle Information			
Model Year		2002	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 185/65R15 86H
Maximum Load (kg)	530	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	844	759	1603
Tire Load	**422**	**379**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	152	122
psi	22	18

	Front	Rear
Available Reserve Pressure (psi)	**8**	**12**
Reserve (under inflation) for 25% TPMS option	**1**	**5**
Reserve (under inflation) for 30% TPMS option	**(1)**	**3**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2002		
Type	SUV	Luxury	
Seating (frt/rear)	2	5	(2/3/2)
Max Trunk/Cargo Load (kg)	49		
Recommended Tire Pressure @ max veh load (F/R)			
kPa	220	220	
psi	32	32	

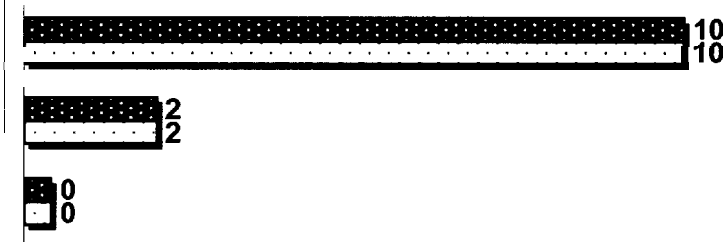
Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 235/65R17 103T
Maximum Load (kg)	875	
Pressure (kPa)	240	

Vehicle Load

Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options

	Mass in kg		
	Front	Rear	Total
Total Axle Load	1268	1262	2530

	Front	Rear
Available Reserve Pressure (psi)	**10**	**10**
Reserve (under inflation) for 25% TPMS option	**2**	**2**
Reserve (under inflation) for 30% TPMS option	**0**	**0**



Attachment III.E.

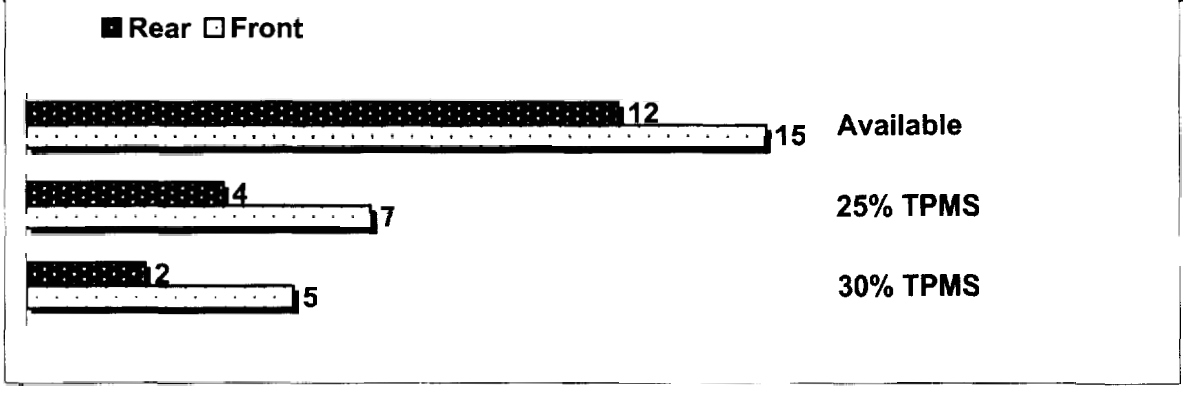
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		SPORTS CAR	Premium
Seating (frt/rear)		2	0
		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	ETRTO Standard
Tire Size	225/50R16 92W
Maximum Load (kg)	630
Pressure (kPa)	250

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	674	783	1458
Tire Load	337	392	

	Front	Rear
Available Reserve Pressure (psi)	15	12
Reserve (under inflation) for 25% TPMS option	7	4
Reserve (under inflation) for 30% TPMS option	5	2



Attachment III.E.

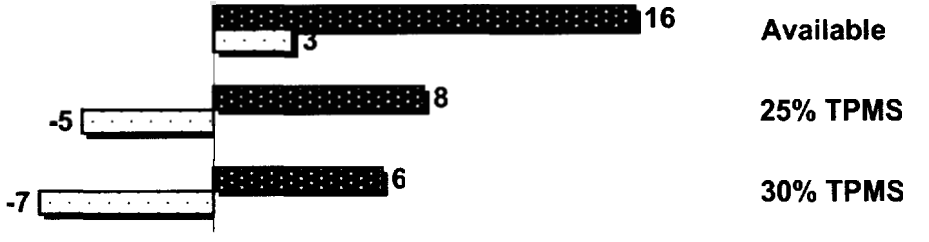
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		LUXURY	Entry
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/50R17 93V
Maximum Load (kg)	600	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1100	816	1916
Tire Load	550	408	

	Front	Rear
Available Reserve Pressure (psi)	3	16
Reserve (under inflation) for 25% TPMS option	(5)	8
Reserve (under inflation) for 30% TPMS option	(7)	6



Attachment III.E.

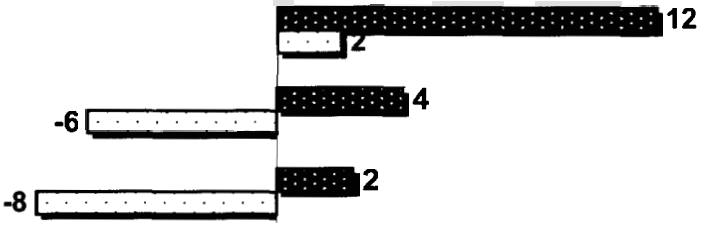
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 93V
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1110	900	2010
Tire Load	555	450	

	Front	Rear
Available Reserve Pressure (psi)	2	12
Reserve (under inflation) for 25% TPMS option	(6)	4
Reserve (under inflation) for 30% TPMS option	(8)	2



Attachment III.E.

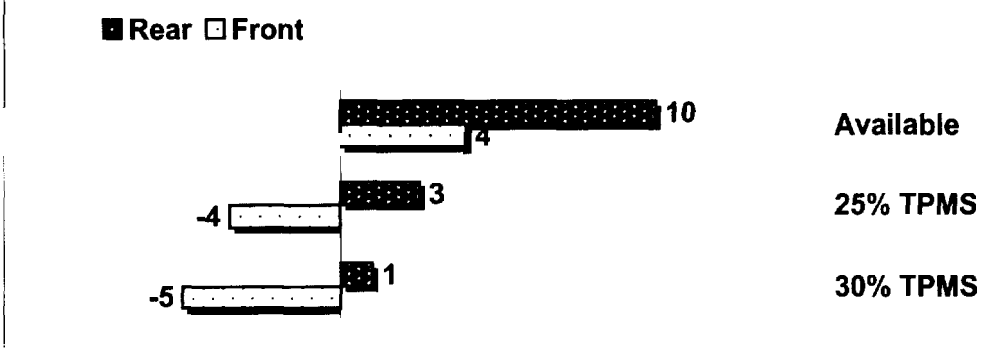
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		LUXURY	Mid
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 225/55R16 94V
Maximum Load (kg)	670
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1149	1014	2163

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	177	138
	psi	26	20
		Front	Rear
Available Reserve Pressure (psi)		**4**	**10**
Reserve (under inflation) for 25% TPMS option		**(4)**	**3**
Reserve (under inflation) for 30% TPMS option		**(5)**	**1**



Attachment III.E.

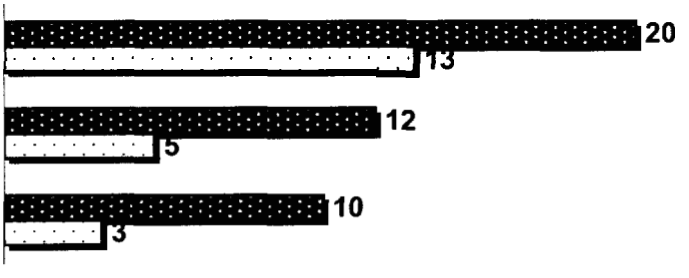
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		SPORTS CAR	Premium
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	230	230
	psi	33	33

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 205/55R16 89V
Maximum Load (kg)	580
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	867	713	1580
Tire Load	**433**	**356**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	138	93
psi	20	13
	Front	Rear
Available Reserve Pressure (psi)	**13**	**20**
Reserve (under inflation) for 25% TPMS option	**5**	**12**
Reserve (under inflation) for 30% TPMS option	**3**	**10**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		COMPACT	Premium
Seating (frt/rear)		2	2
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	210	210
	psi	30	30

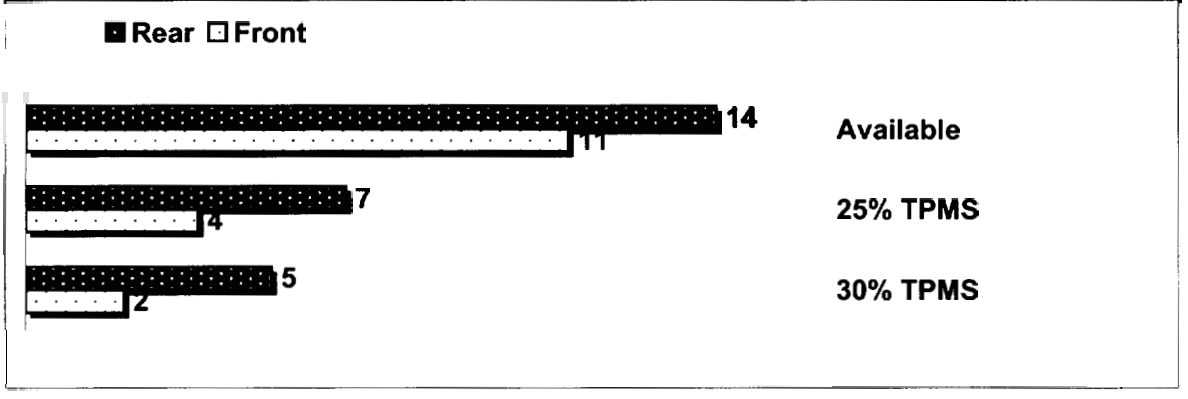
Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 185/70R14 87S
Maximum Load (kg)	545	
Pressure (kPa)	240	

Vehicle Load

Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options

	Mass in kg		
	Front	Rear	Total
Tire Load	**405**	**373**	

	Front	Rear
Available Reserve Pressure (psi)	**11**	**14**
Reserve (under inflation) for 25% TPMS option	**4**	**7**
Reserve (under inflation) for 30% TPMS option	**2**	**5**



Attachment III.E.

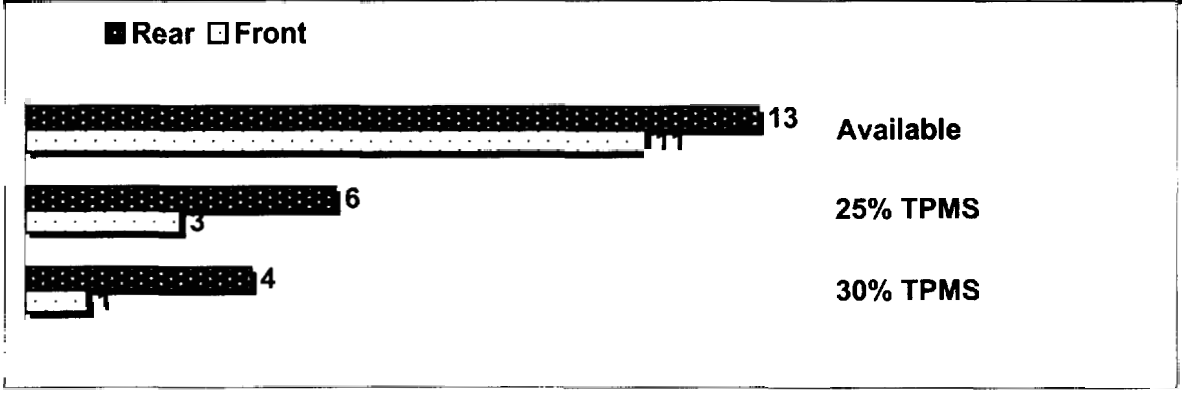
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	230	210
	psi	33	30

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 185/70R14 87S
Maximum Load (kg)	545
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	866	767	1633
Tire Load	**433**	**383**	

	Front	Rear
Available Reserve Pressure (psi)	**11**	**13**
Reserve (under inflation) for 25% TPMS option	**3**	**6**
Reserve (under inflation) for 30% TPMS option	**1**	**4**



Attachment III.E.

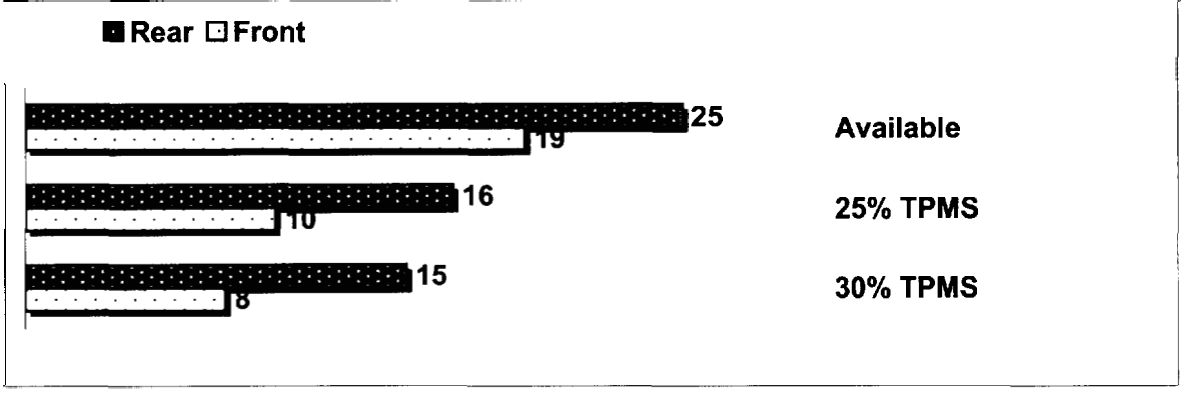
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2002	
Type		COMPACT	Premium
Seating (frt/rear)		2	0
Max Trunk/Cargo Load (kg)		30	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	260	240
	psi	38	35

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 165/65R14 78S
Maximum Load (kg)	425
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	627	448	1075

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	133	68
	psi	19	10
		Front	Rear
Available Reserve Pressure (psi)		**19**	**25**
Reserve (under inflation) for 25% TPMS option		**10**	**16**
Reserve (under inflation) for 30% TPMS option		**8**	**15**



Attachment III.E.

RESERVE PRESSURE CALCULATIONS

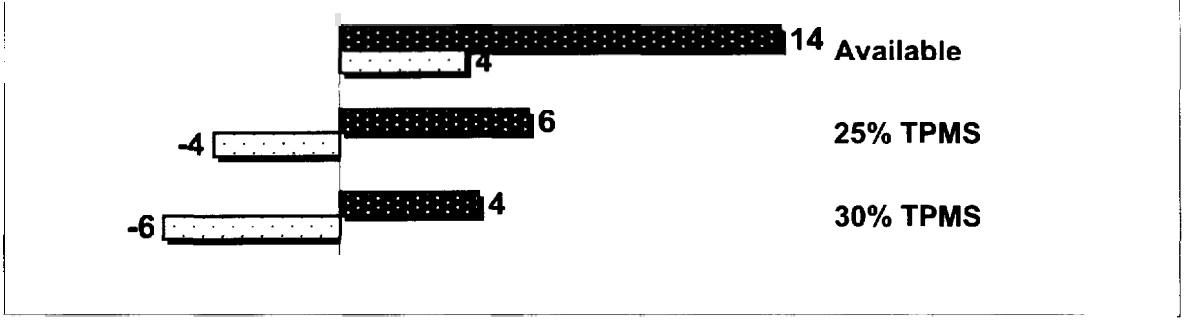
Vehicle Information			
Model Year		2003	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 205/60R16 91V
Maximum Load (kg)	615	
Pressure (kPa)	240	

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1104	881	1985

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	192	122
psi	28	18

	Front	Rear
Available Reserve Pressure (psi)	4	14
Reserve (under inflation) for 25% TPMS option	(4)	6
Reserve (under inflation) for 30% TPMS option	(6)	4



Attachment III.E.

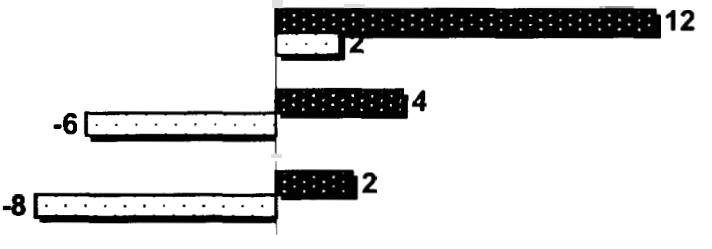
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2003	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)		45	
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	220	220
	psi	32	32

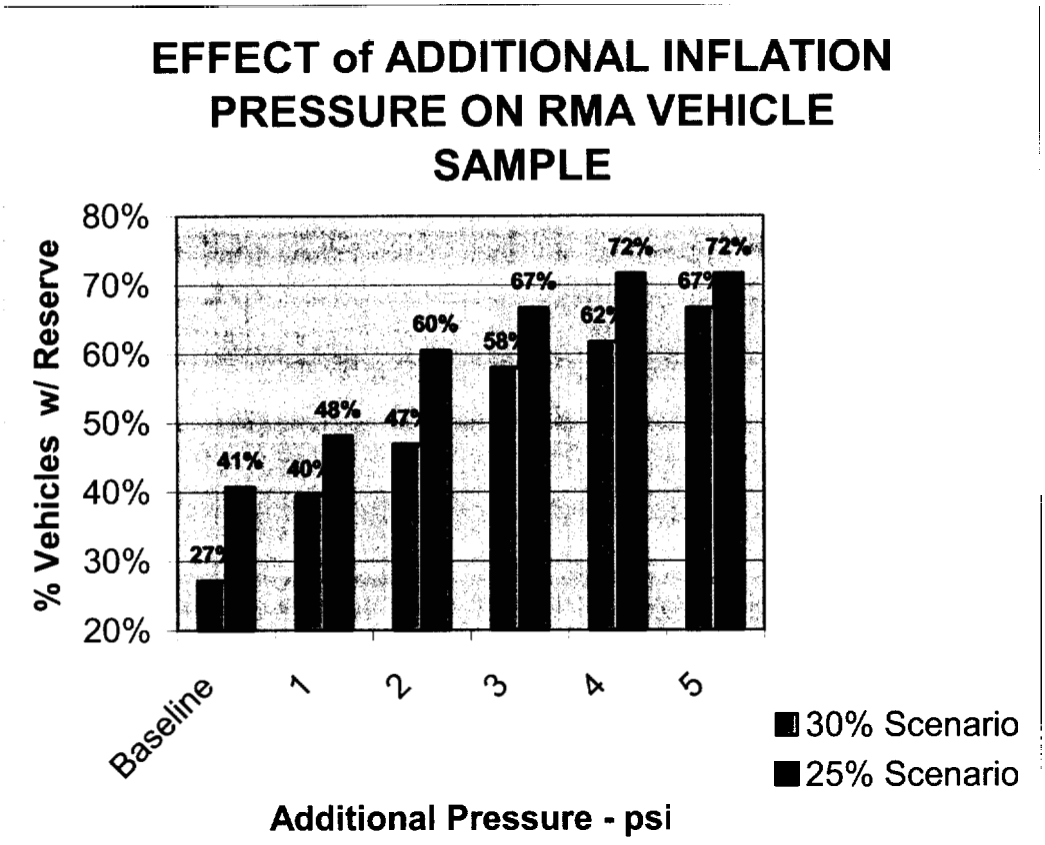
Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard
Tire Size	P 215/50R17 93V
Maximum Load (kg)	600
Pressure (kPa)	240

Vehicle Load	Mass in kg		
	Front	Rear	Total
Total axle load includes Curb Weight, occupants, allowable luggage & vehicle options			
Total Axle Load	1110	900	2010

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	**205**	**135**
	psi	30	20
		Front	Rear
Available Reserve Pressure (psi)		**2**	**12**
Reserve (under inflation) for 25% TPMS option		**(6)**	**4**
Reserve (under inflation) for 30% TPMS option		**(8)**	**2**



Attachment IV.



By adding the pressure necessary to create the pressure reserve, the percentage of vehicles* having sufficient reserve can be increased:

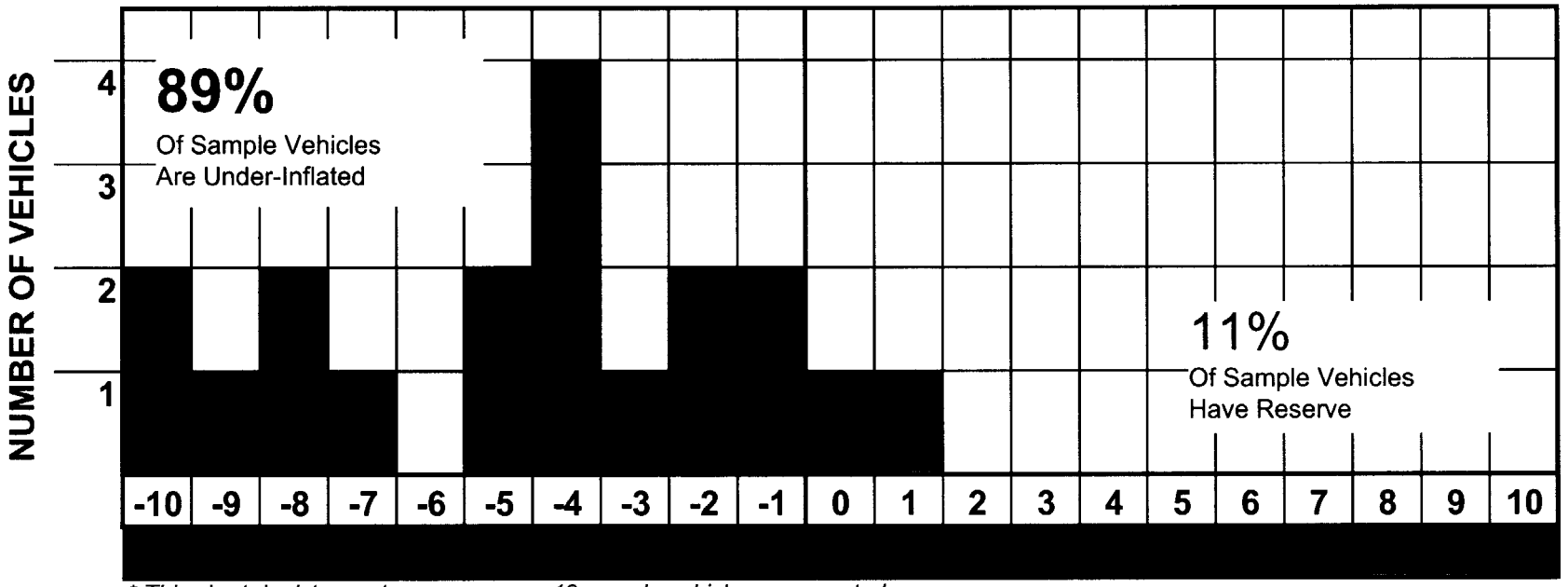
30% TPMS	27%	67%
25% TPMS	41%	72%

** This attachment is based on the 81 vehicle samples referred to in Attachments III.A., III.B., III.C., III.D., and III.E. Also note, 35 psi was arbitrarily selected as an upper limit, although, in many cases, 35 psi could be exceeded.*

Attachment V.A.

HISTOGRAM SUMMARY*:

RESERVE OR UNDER-INFLATION
AT TPMS WARNING ACTIVATION OF 30% TPMS

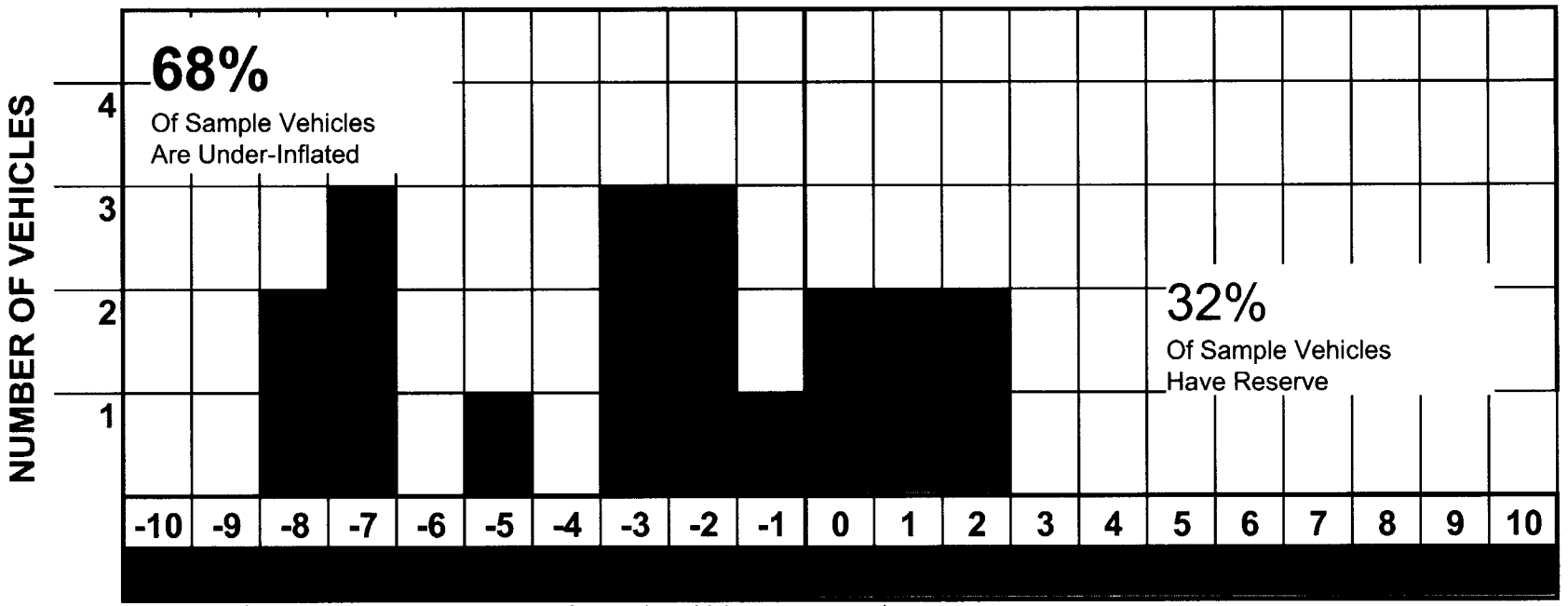


** This chart depicts most severe cases. 19 sample vehicles represented.*

Attachment V.A.

HISTOGRAM SUMMARY*:

RESERVE OR UNDER-INFLATION
AT TPMS WARNING ACTIVATION OF25% TPMS



** This chart depicts most severe cases. 19 sample vehicles represented.*

Attachment V.B.

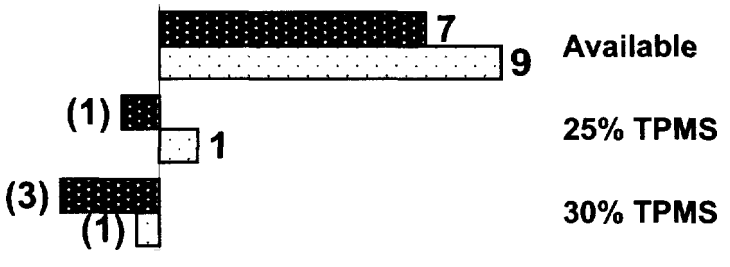
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		1997	
Type		FULL SIZE	
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	221	221
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/70R15
Maximum Load (kg)	735	640
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1215	1258	2473

	Front	Rear
Available Reserve Pressure (psi)	**9**	**7**
Reserve (under inflation) for 25% TPMS option	**1**	**(1)**
Reserve (under inflation) for 30% TPMS option	**(1)**	**(3)**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

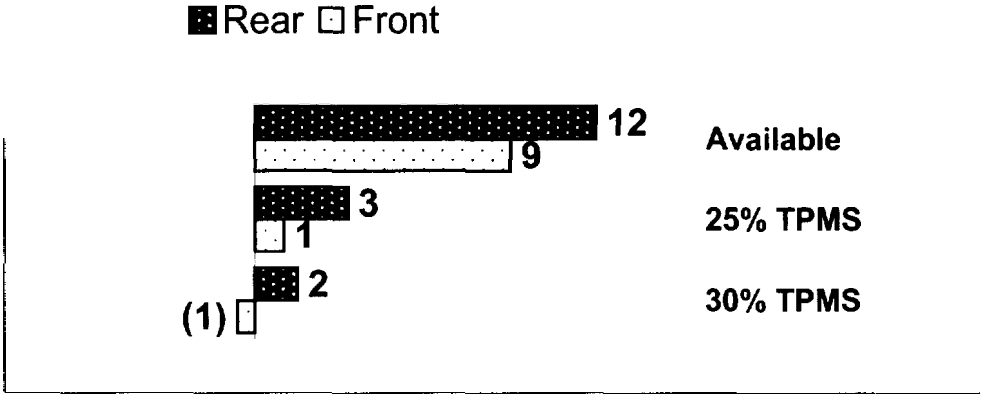
Vehicle Information		
Model Year	1998	
Type	PICK UP Full Size	
Seating (frt/rear)	3	
Max Trunk/Cargo Load (kg)		
Recommended Tire Pressure @ max veh load (F/R)		
kPa	221	240
psi	32	35

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard	
Tire Size	P 235/70R16	
Maximum Load (kg)	900	775
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1338	1315	2654
Tire Load	**669**	**658**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	162	157

	Front	Rear
Available Reserve Pressure (psi)	**9**	**12**
Reserve (under inflation) for 25% TPMS option	**1**	**3**
Reserve (under inflation) for 30% TPMS option	**(1)**	**2**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

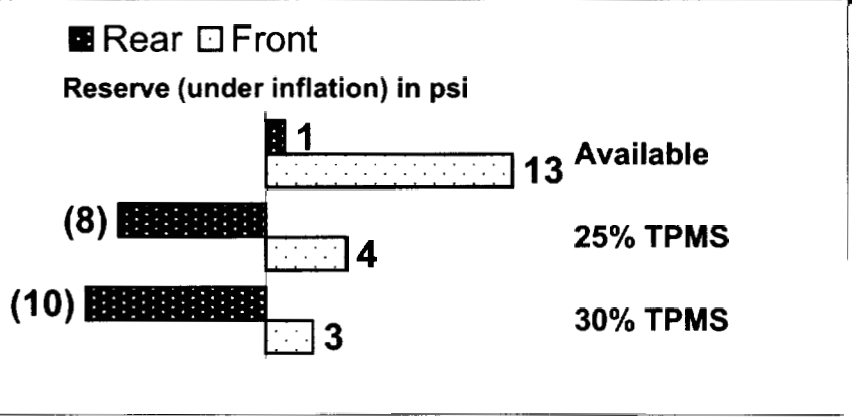
Vehicle Information			
Model Year	1999		
Type	PICK UP Compact		
Seating (frt/rear)	3		
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	240	240
	psi	35	35

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 205/75R14
Maximum Load (kg)	695	600
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	998	1247	2245
Tire Load	**499**	**624**	

F

	Front	Rear
Available Reserve Pressure (psi)	**13**	**1**
Reserve (under inflation) for 25% TPMS option	**4**	**(8)**
Reserve (under inflation) for 30% TPMS option	**3**	**(10)**



Attachment V.B.

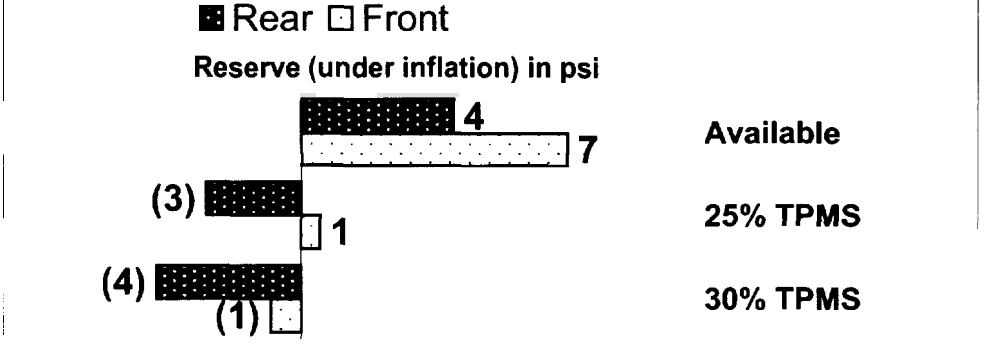
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		1999	
Type		SUV	Mid Size
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	180	180
	psi	26	26

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P P235/75R15
Maximum Load (kg)	920	795
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total

	Front	Rear
Available Reserve Pressure (psi)	7	4
Reserve (under inflation) for 25% TPMS option	1	(3)
Reserve (under inflation) for 30% TPMS option	(1)	(4)



Attachment V.B.

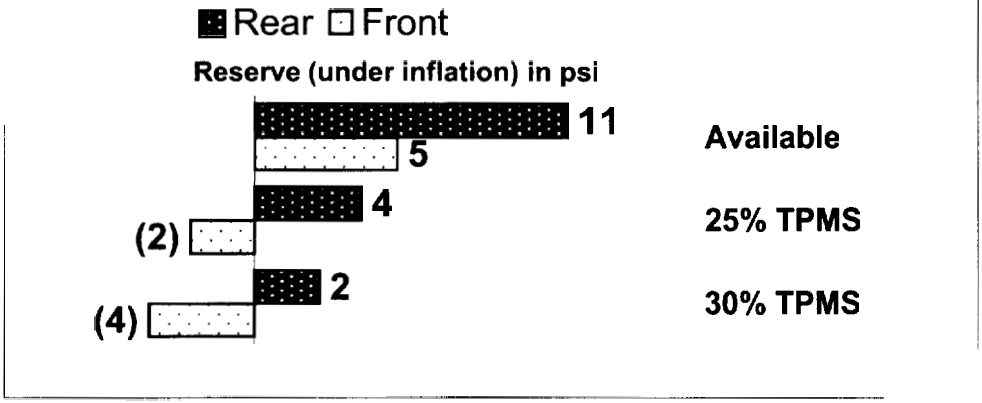
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		1999	
Type		MID SIZE	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	200	200
	psi	29	29

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 205/60R15
Maximum Load (kg)	590	510
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	976	845	1821
Tire Load	**488**	**423**	

	Front	Rear
Available Reserve Pressure (psi)	**5**	**11**
Reserve (under inflation) for 25% TPMS option	**(2)**	**4**
Reserve (under inflation) for 30% TPMS option	**(4)**	**2**



Attachment V.B.

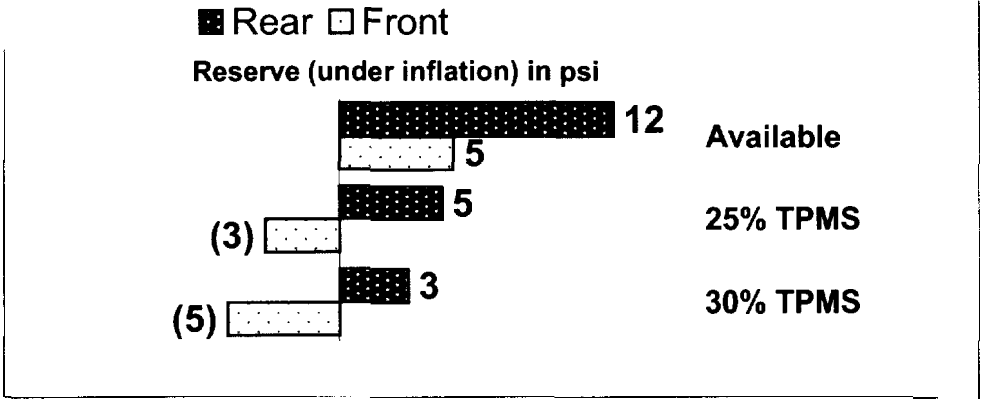
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		1999	
Type		COMPACT	Premium
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	228	207
	psi	33	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size	P 195/55R15	
Maximum Load (kg)	500	435
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	901	727	1628
Tire Load	**450**	**364**	

	Front	Rear
Available Reserve Pressure (psi)	**5**	**12**
Reserve (under inflation) for 25% TPMS option	**(3)**	**5**
Reserve (under inflation) for 30% TPMS option	**(5)**	**3**



Attachment V.B.

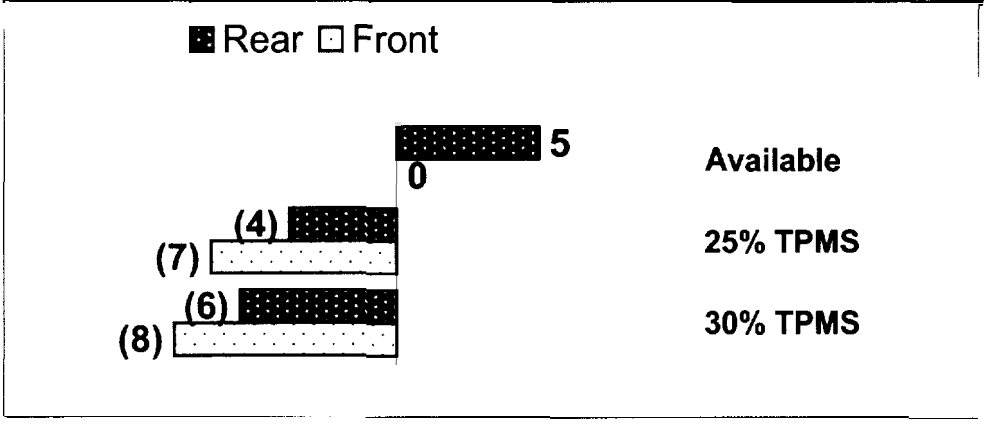
RESERVE PRESSURE C/ .CUL/\TIO

Vehicle Information	
Model Year	1999
Type	PICK UP Compact
Seating (frt/rear)	3
Max Trunk/Cargo Load (kg)	
ımende F n I (F:/R) kF a 2(	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size	P	P215/65R15
Maximum Load (kg)	685	595
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1082	1157	2239
Tire Load	**541**	**578**	

	Front	Rear
Available Reserve Pressure (psi)	**0**	**5**
Reserve (under inflation) for 25% TPMS option	**(7)**	**(4)**
Reserve (under inflation) for 30% TPMS option	**(8)**	**(6)**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

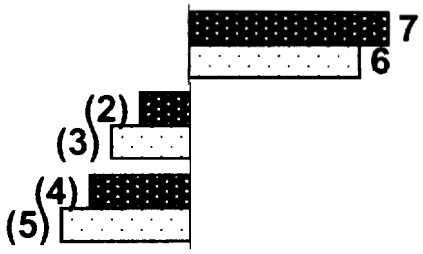
Vehicle Information			
Model Year	1999		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/70R15
Maximum Load (kg)	735	640
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1236	1215	2451

F

	Front	Rear
Available Reserve Pressure (psi)	**6**	**7**
Reserve (under inflation) for 25% TPMS option	**(3)**	**(2)**
Reserve (under inflation) for 30% TPMS option	**(5)**	**(4)**



Attachment V.B.

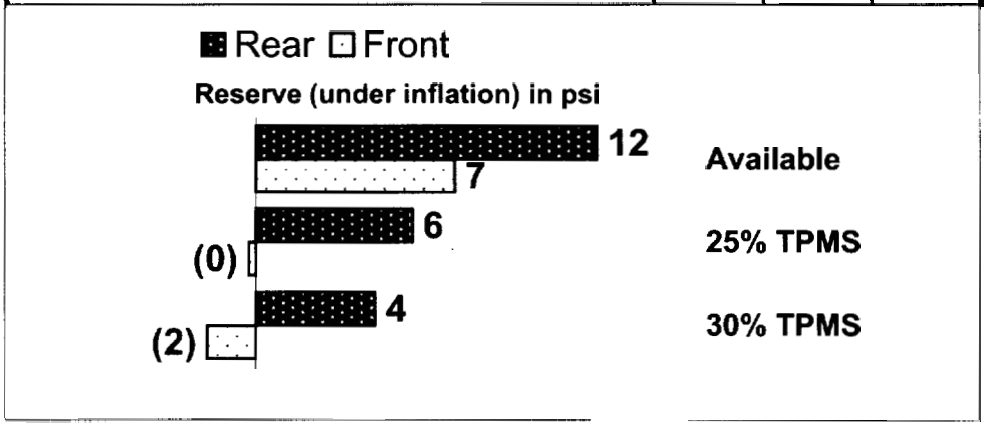
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	1999	
Type	MID SIZE Entry	
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)		
Recommended Tire Pressure @ max veh load (F/R)		
kPa	200	180
psi	29	26

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R15
Maximum Load (kg)	640	555
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1015	805	1819

	Front	Rear
Available Reserve Pressure (psi)	7	12
Reserve (under inflation) for 25% TPMS option	(0)	6
Reserve (under inflation) for 30% TPMS option	(2)	4



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

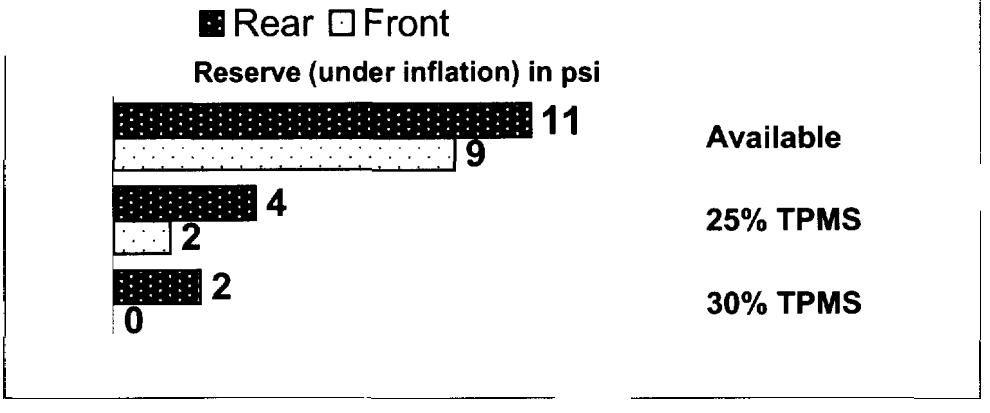
Vehicle Information		
Model Year	1999	
Type	COMPACT	Premium
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)		
Recommended Tire Pressure @ max veh load (F/R)		
kPa	207	200
psi	30	29

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard	
Tire Size	P 185/65R14	
Maximum Load (kg)	510	440
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	798	730	1529
Tire Load	399	365	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	148	124
psi	21	18

	Front	Rear
Available Reserve Pressure (psi)	9	11
Reserve (under inflation) for 25% TPMS option	2	4
Reserve (under inflation) for 30% TPMS option	0	2



Attachment V.B.

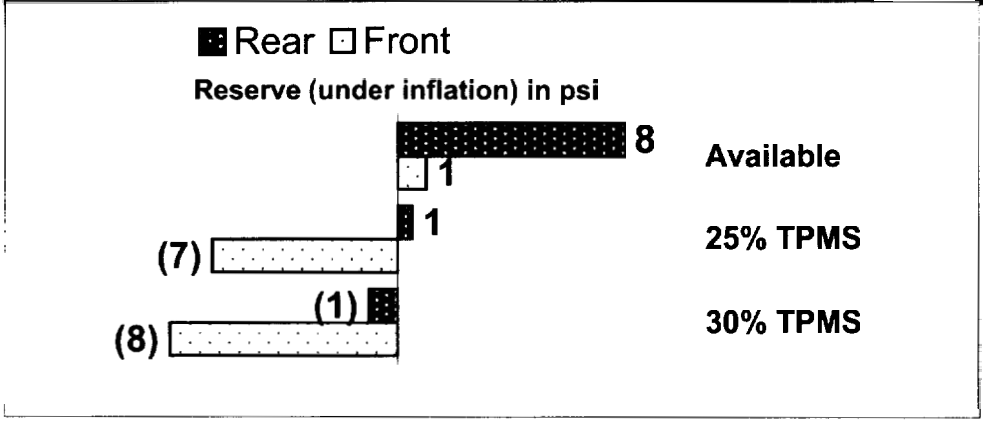
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		LUXURY	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	207	207
	psi	30	30

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/60R16
Maximum Load (kg)	670	580
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1222	1072	2294
Tire Load	**611**	**536**	

	Front	Rear
Available Reserve Pressure (psi)	**1**	**8**
Reserve (under inflation) for 25% TPMS option	**(7)**	**1**
Reserve (under inflation) for 30% TPMS option	**(8)**	**(1)**



Attachment V.B.

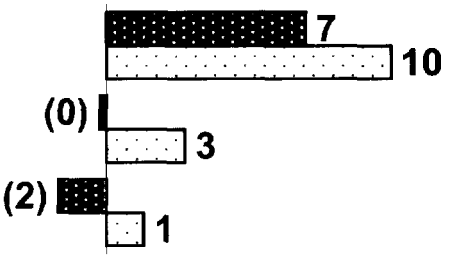
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2000	
Type		SUV	Entry
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	200	200
	psi	29	29

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size	P	P205/70R15
Maximum Load (kg)	680	590
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	921	978	1898
Tire Load	**460**	**489**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		---	---
Pressure required to carry Mass/2/1.10 load		X	X
	kPa	133	149
	psi	19	22
		Front	Rear
Available Reserve Pressure (psi)		**10**	**7**
Reserve (under inflation) for 25% TPMS option		**3**	**(0)**
Reserve (under inflation) for 30% TPMS option		**1**	**(2)**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

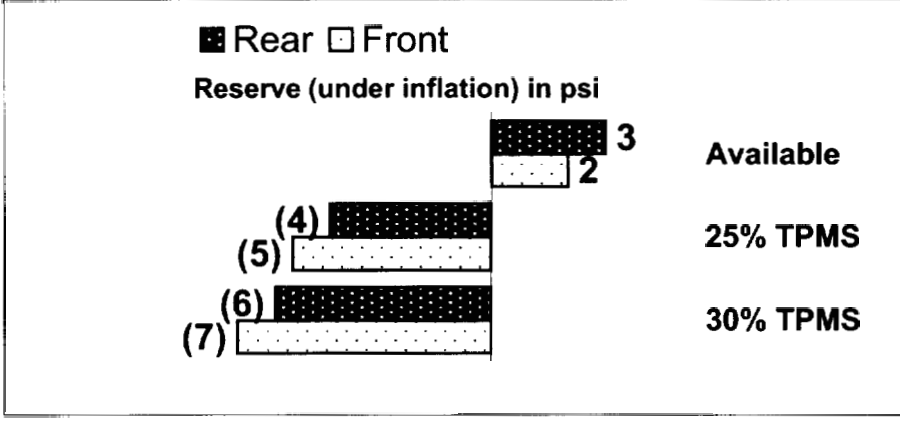
Vehicle Information		
Model Year	2000	
Type	SPORTY	
Seating (frt/rear)	2	
Max Trunk/Cargo Load (kg)		
Recommended Tire Pressure @ max veh load (F/R)		
kPa	200	200
psi	29	29

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard	
Tire Size	P 195/60R15	
Maximum Load (kg)	540	470
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	959	943	1903
Tire Load	**480**	**472**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	187	181
psi	27	26

	Front	Rear
Available Reserve Pressure (psi)	**2**	**3**
Reserve (under inflation) for 25% TPMS option	**(5)**	**(4)**
Reserve (under inflation) for 30% TPMS option	**(7)**	**(6)**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

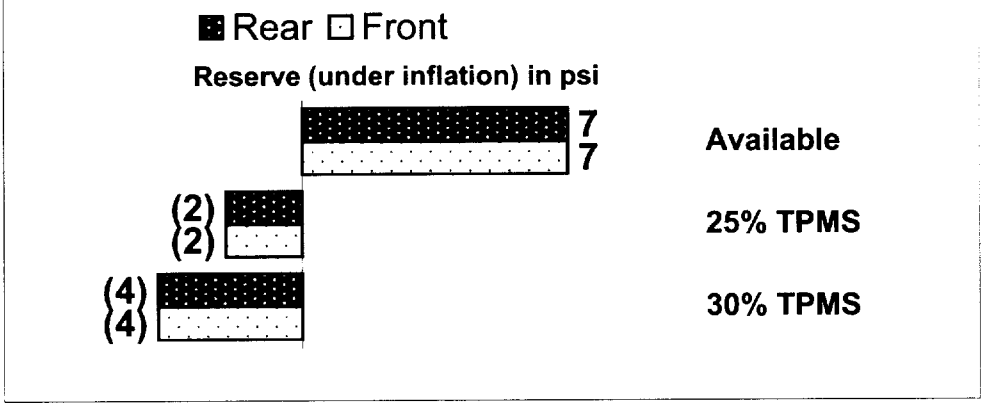
Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/3/3)
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
kPa	250	250	
psi	36	36	

Tire Load & Inflation Pressure from Standardizing Body		ETRTO Standard
Tire Size		215/65R16
Maximum Load (kg)	750	575
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1125	1125	2250
Tire Load	**562**	**562**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	197	197
psi	29	29

	Front	Rear
Available Reserve Pressure (psi)	**7**	**7**
Reserve (under inflation) for 25% TPMS option	**(2)**	**(2)**
Reserve (under inflation) for 30% TPMS option	**(4)**	**(4)**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

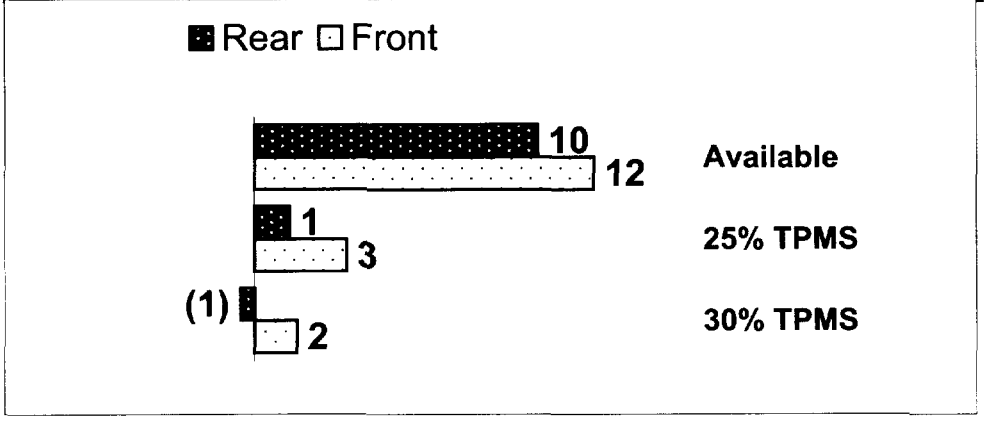
Vehicle Information		
Model Year	2001	
Type	SUV	Full Size
Seating (frt/rear)	2	3
Max Trunk/Cargo Load (kg)		
Recommended Tire Pressure @ max veh load (F/R)		
kPa	240	240
psi	35	35

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 265/70R16
Maximum Load (kg)	1090	955
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1633	1701	3334
Tire Load	**816**	**851**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	159	173
psi	23	25

	Front	Rear
Available Reserve Pressure (psi)	**12**	**10**
Reserve (under inflation) for 25% TPMS option	**3**	**1**
Reserve (under inflation) for 30% TPMS option	**2**	**(1)**



Attachment V.B.

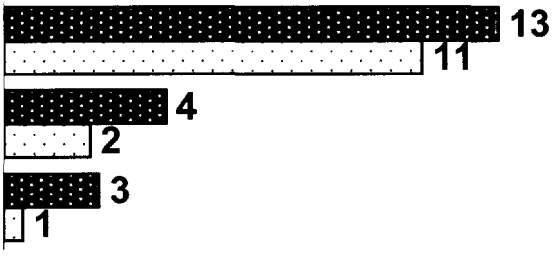
RESERVE PRESSURE CALCULATIONS

Vehicle Information		
Model Year	2001	
Type	PICK UP Full Size	
Seating (frt/rear)	3	
Max Trunk/Cargo Load (kg)		
Recommended Tire Pressure @ max veh load (F/R)		
kPa	240	240
psi	35	35

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard	
Tire Size	P 265/75R16	
Maximum Load (kg)	1180	1020
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Tota
GAWR	1780	1701	3481
Tire Load	890	851	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	---	---
Pressure required to carry Mass/2/1.10 load	X	X
kPa	166	151
psi	24	22
	Front	Rear
Available Reserve Pressure (psi)	11	13
Reserve (under inflation) for 25% TPMS option	2	4
Reserve (under inflation) for 30% TPMS option	1	3



Attachment V.B.

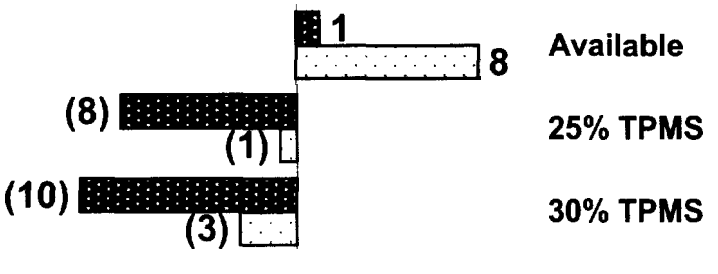
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/75R15
Maximum Load (kg)	790	685
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1270	1429	2699
Tire Load	**635**	**714**	

	Front	Rear
Available Reserve Pressure (psi)	**8**	**1**
Reserve (under inflation) for 25% TPMS option	**(1)**	**(8)**
Reserve (under inflation) for 30% TPMS option	**(3)**	**(10)**



Attachment V.B.

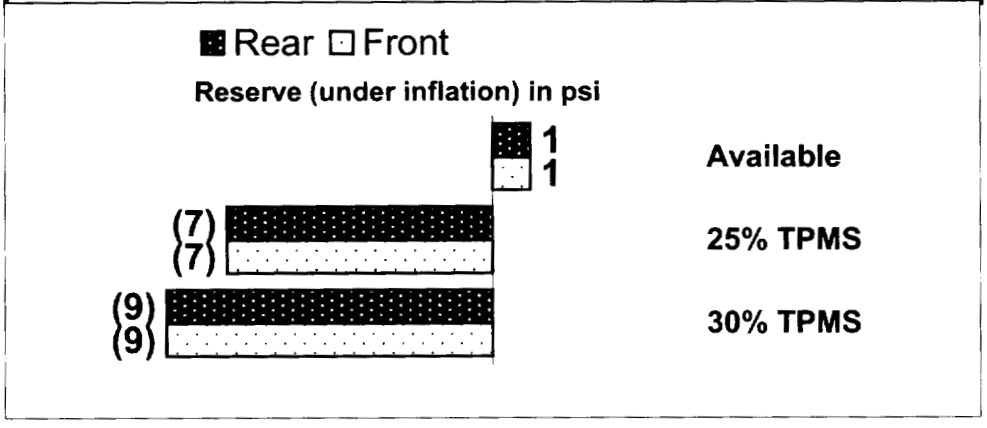
RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year		2001	
Type		MID SIZE Premium	
Seating (frt/rear)		2	3
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
	kPa	221	221
	psi	32	32

Tire Load & Inflation Pressure from Standardizing Body	T&RA Standard	
Tire Size	P 205/65R15	
Maximum Load (kg)	635	550
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1209	1209	2418
Tire Load	**604**	**604**	

Pressure Reserve Calculation			
Pressure required to carry Mass/2 load		X	X
Pressure required to carry Mass/2/1.10 load		---	---
	kPa	217	217
	psi	31	31
		Front	Rear
Available Reserve Pressure (psi)		**1**	**1**
Reserve (under inflation) for 25% TPMS option		**(7)**	**(7)**
Reserve (under inflation) for 30% TPMS option		**(9)**	**(9)**



Attachment V.B.

RESERVE PRESSURE CALCULATIONS

Vehicle Information			
Model Year	2001		
Type	VAN	Compact	
Seating (frt/rear)	2	5	(2/2/3)
Max Trunk/Cargo Load (kg)			
Recommended Tire Pressure @ max veh load (F/R)			
kPa	240	240	
psi	35	35	

Tire Load & Inflation Pressure from Standardizing Body		T&RA Standard
Tire Size		P 215/65R15
Maximum Load (kg)	685	595
Pressure (kPa)	240	180

Vehicle Load	Mass in kg		
	Front	Rear	Total
GAWR	1236	1236	2472
Tire Load	**618**	**618**	

Pressure Reserve Calculation		
Pressure required to carry Mass/2 load	X	X
Pressure required to carry Mass/2/1.10 load	---	---
kPa	194	194
psi	28	28

	Front	Rear
Available Reserve Pressure (psi)	**7**	**7**
Reserve (under inflation) for 25% TPMS option	**(2)**	**(2)**
Reserve (under inflation) for 30% TPMS option	**(4)**	**(4)**